



EUROPEAN COMMISSION
DG Competition

***Case M.8055 -
COHERENT / ROFIN-
SINAR TECHNOLOGIES***

Only the English text is available and authentic.

**REGULATION (EC) No 139/2004
MERGER PROCEDURE**

Article 6(1)(b) in conjunction with Art 6(2)
Date: 26/10/2016

***In electronic form on the EUR-Lex website under document
number 32016M8055***



EUROPEAN COMMISSION

Brussels, 26.10.2016
C(2016) 7025 final

In the published version of this decision, some information has been omitted pursuant to Article 17(2) of Council Regulation (EC) No 139/2004 concerning non-disclosure of business secrets and other confidential information. The omissions are shown thus [...]. Where possible the information omitted has been replaced by ranges of figures or a general description.

PUBLIC VERSION

MERGER PROCEDURE

To the notifying party

Dear Madam(s) and/or Sir(s),

**Subject: Case M.8055 – Coherent / Rofin-Sinar Technologies
Commission decision pursuant to Article 6(1)(b) in conjunction with
Article 6(2) of Council Regulation No 139/2004¹ and Article 57 of the
Agreement on the European Economic Area²**

¹ OJ L 24, 29.1.2004, p. 1 (the 'Merger Regulation'). With effect from 1 December 2009, the Treaty on the Functioning of the European Union ('TFEU') has introduced certain changes, such as the replacement of 'Community' by 'Union' and 'common market' by 'internal market'. The terminology of the TFEU will be used throughout this decision.

² OJ L 1, 3.1.1994, p. 3 (the 'EEA Agreement').

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- (1) On 7 September 2016, the European Commission received a notification of a proposed concentration pursuant to Article 4 and following a referral pursuant to Article 4(5) of the Merger Regulation by which the undertaking Coherent, Inc. ('Coherent', USA) acquires within the meaning of Article 3(1)(b) of the Merger Regulation sole control of Rofin-Sinar Technologies Inc. ('Rofin', USA and Germany) by way of purchase of shares ('the Transaction').³ Coherent and Rofin are collectively referred to as 'the Parties'.

I. THE PARTIES

- (2) Coherent is a US-based public company that designs, manufactures, services and markets lasers and related accessories for a diverse group of customers, including for materials processing applications.
- (3) Rofin is headquartered in the US and Germany and specializes in the design, development, engineering, manufacturing and marketing of lasers and laser-based system solutions for industrial processing applications.

II. THE OPERATION

- (4) On 16 March 2016, Coherent and Rofin entered into an Agreement and Plan of Merger pursuant to which Coherent is to acquire 100% of the share capital of Rofin, whereby Coherent will gain sole control over Rofin. The Transaction therefore constitutes a concentration pursuant to Article 3(1)(b) of the EU Merger Regulation.

III. EU DIMENSION

- (5) The Transaction does not have a Union dimension within the meaning of Article 1 of the Merger Regulation as the turnover thresholds set therein are not met. As the Transaction was capable of being reviewed under the national competition laws of Germany, Spain and the United Kingdom, the Notifying Parties requested the referral of the case to the Commission pursuant to Article 4(5) of the Merger Regulation on 26 May 2016. The Member States competent to examine the Transaction did not express their disagreement to the request for referral within 15 working days. The Transaction is therefore deemed to have a Union dimension.

IV. MARKET DEFINITIONS

- (6) The Transaction concerns the worldwide markets for lasers and related products. The Parties both produce different types of lasers and Rofin also produces downstream laser systems in which lasers are incorporated.

IV.1. Description of the products

- (7) The term laser⁴ is an acronym for "Light Amplification by Stimulated Emission of Radiation". As shown in Figure 1 below, lasers generally include:

→ an external energy source that is used to excite the laser medium;

³ Publication in the Official Journal of the European Union No C 338, 15.9.2016, p. 14.

⁴ The laser is also called laser source, as opposed to laser system, and the two terms are used interchangeably in the present decision.

- an active laser medium (e.g. gas, solid-state, semiconductor) that emits light when excited;
 - an optical resonator with a partially-reflective output mirror at one end and a fully-reflective rear mirror at the other which permits the light to bounce back and forth between the mirrors through the laser medium.
- (8) The energy source excites the laser medium, which converts the energy from the source into an emission of photons. The photons stimulate the release of more photons, as they are reflected between the mirrors which form the resonator. The resulting photons are emitted in the form of a laser beam through an output port.

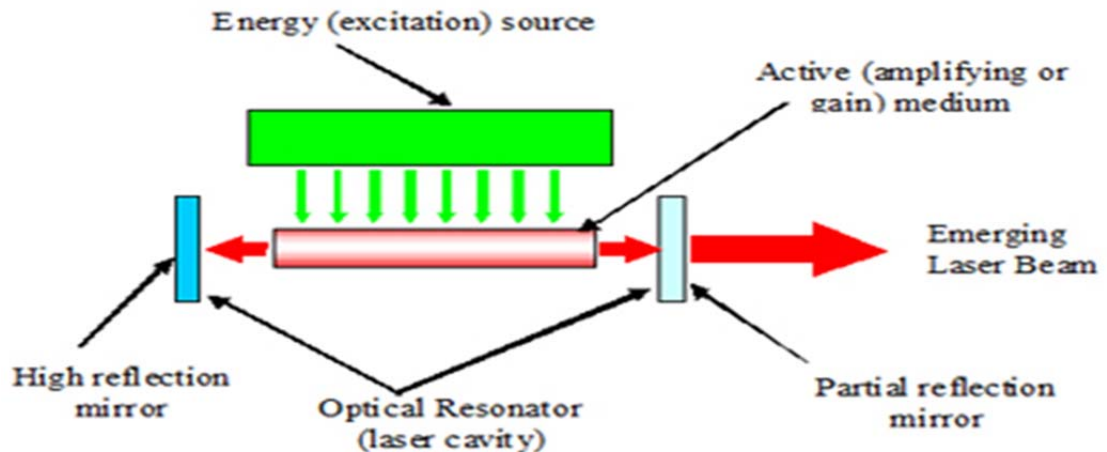


Figure 1 Diagram of a laser

- (9) The laser medium, the optical resonator and the external energy source can all be different, resulting in many types of lasers with multiple different designs. The most commonly used laser media are certain gases, solid-state and semiconductor. The gases used as an active laser medium include CO₂, argon ion and excimer. Solid-state lasers are fibre lasers, disk lasers and rod lasers. Semiconductor lasers or diode lasers may be used directly in certain applications but are also used as the energy source for certain solid-state lasers.
- (10) All laser media can be produced at various power levels expressed in watts, “W”, and kilowatts, “kW”, and the beam of the laser can also be produced in pulsed mode or in continuous wave. Lasers that generate light pulses with extremely short durations, i.e. less than a few pico-seconds, are called ultrafast lasers. Different laser media (CO₂, excimer, rod etc.) produce laser beams with different wavelengths. Laser wavelengths can sometimes be important for the type of material processed, as wavelengths interact better on some materials than others.

IV.2. Product market definition

- (11) The areas where the Parties’ activities overlap are CO₂ lasers, diode lasers, fibre lasers and ultra-fast lasers. The Parties have only identified low-power CO₂ lasers as affected markets, which was the focus of the Commission's investigation. Contrary to the Parties' submissions, some market feedback suggested that ultra-fast lasers might also be an affected market. Therefore a market investigation was also carried out in the ultra-fast lasers.

- (12) In line with the decisional practice of the Commission⁵ and a decision of the German Competition Authority ('Bundeskartellamt')⁶ of 2006, the Parties propose to describe market conditions by reference to different laser media (distinguishing for instance between CO₂ lasers, excimer lasers, fibre lasers and other) and, when appropriate, power (distinguishing between lasers of different W or kW ranges).

IV.2.1. Product market definitions for CO₂ lasers

- (13) The Commission investigated whether the product market for CO₂ lasers should be further sub-segmented into (i) high and low-power CO₂ lasers, (ii) a low-end and a medium segment within low-power CO₂ lasers and (iii) different designs of CO₂ lasers.

IV.2.1.1. High-power and low-power CO₂ lasers

- (14) High-power CO₂ lasers above 1kW are commonly distinguished from low-power CO₂ lasers below 1kW and the Parties submit – in line with the 2006 decision of the Bundeskartellamt – that those two types of CO₂ lasers fall into different product markets.
- (15) High-power CO₂ lasers are primarily used for heavy duty cutting and welding of predominantly thicker metals as well as for high performance processing of non-metals, and they differ from low-power CO₂ lasers in their design, price point and other features. In addition, there is a range of power between 600W and 999W in which there is very little demand, which, the Parties argue, suggests that low power and high power lasers are distinct.
- (16) The technology used for high power and low power CO₂ lasers can also be different; The Parties submit that scaling from 1W to 999W was both possible and relatively easy to do using the same power supply technology. For power levels above 1kW a second power supply technology (RF or DC) is needed and the lasers are often glass tube. Few competitors are active in both the below and the above 1kW power levels. For example, Panasonic, Fanuc, Mitsubishi Electric or Bystronic are only active above 1kW; Synrad, Universal, Iradion or FEHA are only active below 1kW.
- (17) The responses received from customer and competitors in the Commission's market investigation⁷ confirmed that not all manufacturers were active in all ranges and that there was limited substitutability between lasers below and above 1kW. Generally speaking, the industry seems to agree on the 1kW cut-off point between low-power and high-power CO₂ lasers.

⁵ Cases IV/32.800 and IV/33.335 Quantel International – Continuum/Quantel SA, decision, July 27, 1992, Case M.2781 – Northrop Grumman/TRW, October 16, 2002, paragraph 36.

⁶ BKartA, B 7 – 97/06, Coherent/Excel: In 2006, the Bundeskartellamt assessed Coherent's acquisition of competitor Excel (Synrad). The Bundeskartellamt prohibited the transaction due to competition concerns in the market for sealed-off RF-CO₂ lasers with power output up to 600W.

⁷ See replies to questions 3 and 10 of Q1 Questionnaire to competitors and replies to question 13 of Q2 Questionnaire to customers.

- (18) Although the Parties' activities overlap in the above 1kW segment, according to the Parties' submissions the overlap does not lead to affected markets nor does it qualify as other market with significant impact. Therefore it will not be discussed further in this decision.

IV.2.1.2. Low-end and medium power segments within low-power CO2 lasers

- (19) The Notifying Party submits that it is not possible to further sub-segment CO2 lasers within the below 1kW power range arguing that the products are so much differentiated that usually there is no perfect substitution. However, according to the Parties, it seems conceivable that lasers with power levels sufficiently close to each other are substitutable, creating a chain of substitution over all low power CO2 laser sources. Therefore, the Parties submit that, unlike in the case of high power versus low power, no single cut off point exists.
- (20) According to information gathered during the Commission's investigation, it is possible to further sub-segment the below 1 kW, low-power CO2 lasers according to their power levels. Prices below 1kW low-power CO2 lasers vary greatly in the range from 10W to 999W (from USD 300 to USD 80,000), and the power level is the main factor determining the price. Often, laser prices are compared on a per watt basis. Different power levels also address different customer needs. Generally speaking, the lower levels are more suited for coding, marking and engraving, the higher for cutting and welding and treating textiles and plastics.
- (21) A plausible segmentation would be to analyse the low-end power segment (below 100W) and the mid-power segment (100-999W). Such delineation would be consistent with Rofin's internal documents⁸ [reference to internal documents]. In addition, conditions of competition appear to be different in the below 100W range, with more competitors present, including Chinese suppliers, and more technologies competing.⁹
- (22) Customers responding to the Commission's market investigation confirmed the lack of substitution between the lasers falling in different power segments with some exceptions on the margins of the segments or for specific applications.
- (23) The majority of the respondents¹⁰ shared the view that replacing a laser source in the mid-power segment (100-999W) with another in the low segment (below 100W) was technically not possible. The power level is tailored to the task to be executed and a lower power level might not be able to carry out the task at all. This was still the majority view when the range was reduced, that is to say when the customers were asked about a possible substitution of a 200W CO2 laser by a 90W CO2 laser. The clear majority said that such substitution was not possible. Only some respondents indicated¹¹ that in some applications it could be envisaged

⁸ See for instance documents ID 380-63, [reference to internal documents].

⁹ See confirmed non-confidential minutes of a call with El.En on 03 August 2016 and confirmed non-confidential minutes of a call with Universal on 21 September 2016, see also replies to question 24 of Q1 Questionnaire to competitors, and replies to question 18 and 25 of Q2 Questionnaire to customers.

¹⁰ See replies to questions 3 and 5 to the email inquiry to customers on purchasing data and substitution sent on 16 September.

¹¹ Four respondents out of 17 said they could revert to lower powers.

to purchase a lower power laser source but also explained that the speed of execution or the quality of the finishing would suffer.

- (24) The substitution from a lower power (below 100W) CO2 laser source to a higher, mid-power CO2 laser source (100-999W) was unanimously discarded based on economic considerations. The laser sources are priced per watt, where the average price of a watt is between USD 70 and 120. Respondents highlighted that the price differences between power levels are not marginal: a 200W, for example, can cost 3, 4 or 5 times as much as a 30W laser source. Therefore, going beyond the power level laid down in the specification of the laser system would disproportionately raise the input costs for the final product. From the technical point of view, some respondents explained that replacing a higher power CO2 laser source with a lower power CO2 laser source could be envisaged. Respondents underlined, however, also that the size of a laser source grows with its power output. Therefore the entire construction of a laser system would need to be adapted when changing to a higher power laser source, putting further limitations on substitution.
- (25) From the supply side perspective, there is very little overlap in terms of competitors. While there are a number of suppliers in the below 100W CO2 laser segment, only very few of them offer lasers above 100W, and entry into the mid-power segment has been confirmed as lengthy and costly. In addition, competition from other laser sources appears to differ in the below 100W and 100-999W segments. Although the Bundeskartellamt did not at the time consider it necessary to define separate markets for the below 100W and the 100-999W segments, it considered that the below 100W CO2 segment was more open to competition also from other laser technologies, such as fibre and YAG laser technology, than the above 100W CO2 segment.
- (26) In addition, few¹² respondents were of the view that a laser source manufacturer in the below 100W segment could readily launch products in the 100-999W segment. Although there were some examples¹³, it was acknowledged that entry took time and was not easy: moving to higher power levels is not solely a question of scaling but additional know how is required and the new product also needs to establish its reputation, even if it introduced by an established manufacturer. Thus, not every supplier is present in every power range. The higher number of competitors and also the more pronounced presence of Asian suppliers below 100W¹⁴ indicates that the below 100W CO2 laser sources could constitute a separate product market.
- (27) Respondents also indicated that there was also a split between the below 100W and above 100W power range CO2 lasers in terms of applications they are suited for: below 100W lasers were typically used for marking and encoding, the above 100W products were rather suited for cutting and drilling. Respondents explicitly

¹² 3 out of 17 respondents to question 1 of the email inquiry to customers on purchasing data and substitution sent on 16 September.

¹³ E.g. Iradion moved from 50W to 250 and Synrad to 400W in the last few years.

¹⁴ See replies to question 18 of Q2 Questionnaire to customers.

suggested the further segmentation of the low power range into a segment below 100W and another above.¹⁵

- (28) There are thus strong indications that the market for low-power CO2 lasers should be further sub-segmented at least into a below 100W and a 100-999W segment based on limited demand-side and supply-side substitutability. However, it is not necessary to conclude on the exact market definition as regards the segments for power levels, as serious doubts as to the Transaction's compatibility with the internal market ("serious doubts") arise in low-power CO2 lasers irrespective of that potential sub-segmentation. Serious doubts arise both in the overall market for all low-power CO2 lasers as well as in the potential sub-segment for 100-999W CO2 lasers.

IV.2.1.3. Different designs of low-power CO2 lasers

- (29) Low-power CO2 lasers could be further segmented according to a variety of design differences, including (i) sealed and semi-sealed lasers¹⁶, (ii) glass tube, metal tube and ceramic tube lasers¹⁷, (iii) direct current or radio frequency stimulated lasers¹⁸ or (iv) pulsed and continuous wave ("CW") lasers¹⁹. The Parties submit that all those types of low-power CO2 lasers belong to the same product market. In contrast, the Bundeskartellamt found in 2006 that the relevant market was the market for sealed-off RF-CO2 lasers.
- (30) The Commission's market investigation did not give a clear answer as to whether the low power CO2 lasers should be further sub-segmented along the above lines. Evidence confirms the delineation of the Bundeskartellamt, where sealed, metal tube and RF stimulated low power CO2 are characteristics that seem to go in hand. The same applies to semi sealed/sealed glass tube DC stimulated CO2 lasers. In general, but not exclusively²⁰, most European and North American firms manufacture the former, most Chinese the latter.
- (31) Respondents to the Commission's market investigation noted that glass tube lasers in the low power segment were either suited only for very specific applications²¹ or

¹⁵ See replies to question 11 of Q1 Questionnaire to competitors and also the confirmed non-confidential minutes of a call with El.En on 03 August 2016.

¹⁶ Semi-sealed CO2 lasers consume the gas over time so that the gas needs to be refilled. Their use is not very common in low-power CO2 lasers up to 1kW. The Bundeskartellamt found that CO2 lasers under the power of 600W were always sealed and that there were practically no CO2 lasers between the range of 600W and 999W. Semi sealed lasers were used in the power ranges above 1000W and therefore were not part of the relevant product market.

¹⁷ The optical resonator of the CO2 laser can be made of glass, metal or ceramic resulting in diverging production costs for manufacturers and diverging operating costs for customers. For instance, glass tube low-power CO2 lasers are cheaper but also less durable than ceramic or metal tube CO2 lasers.

¹⁸ Low-power CO2 lasers can be stimulated through radio frequency ("RF") or direct current ("DC"). In DC low-power CO2 lasers, the electric current is directly inserted in the CO2 gas through electrodes which leads to a faster depletion of the CO2. In contrast, there is no direct contact with the gas in RF low-power CO2 lasers which leads to a longer lifespan.

¹⁹ Pumping may occur in a pulsed mode (i.e. the laser is switched on and off during its end-use application) or in continuous mode.

²⁰ Except for some specialty products using water cooled DC power supplies, such as in case of harsh environments.

²¹ E.g. see the products of German glass tube laser manufacturer FEHA.

not substitutable with metal tube laser sources due to their inferior product quality and lifetime. As regards quality, respondents noted that low power glass tube lasers were not able to be pulsed at high frequency, and had less power stability, which puts considerable limitations to their usability, especially in industrial applications. Glass tube CO₂ lasers are also larger and thus more complicated to integrate into laser systems and they require more maintenance. Their average lifetime is ca. 4 times less than for a metal or ceramic tube laser source.

- (32) Many respondents also noted that the price difference between the low power glass tube/DC CO₂ lasers and metal/ceramic-tube/RF-CO₂ lasers was very high; RF lasers can be 5-6 times more expensive than DC lasers. However, the lifetime of RF lasers is also much higher at 30 000 hours vs. 2 000 hours on average. Therefore, although glass tube/DC CO₂ lasers are considerably cheaper²² most respondents in Europe and North America do not consider purchasing glass tube/DC low power CO₂ laser sources and customers of low power CO₂ laser sources would or could not substitute metal tube lasers with glass tube lasers, and RF stimulated lasers with DC stimulated lasers.²³
- (33) Replies were more mixed as concerns substitution between CW mode and pulsed mode. The majority of the respondents discarded such substitution, but for some applications some substitution appears possible.²⁴
- (34) From a supply side perspective²⁵ most replying laser manufacturers were of the view that there was little substitutability between glass and metal or ceramic tube CO₂ lasers: They involve different technologies, material handling, manufacturing processes, electronic designs as well as different excitation (DC for glass-tube lasers). Manufacturers have already specialised, switching would involve high costs and time, additional R&D would be necessary. Most replies were similar for the case of DC vs RF, RF was noted to be the technology that required more know-how and skill to produce. Manufacturing CW and pulsed mode lasers was in general considered to be more comparable to one another, however, not all competitors agreed and the Commission's investigation was somewhat inconclusive in this respect.
- (35) There are thus indications that, in line with the Bundeskartellamt's previous findings, the market for low-power CO₂ lasers should be further sub-segmented into glass-tube DC lasers on the one hand and metal-tube/ceramic-tube RF lasers on the other hand due to limited demand-side and supply-side substitutability. However, it is not necessary to conclude on the exact market definition concerning a possible sub-segmentation of low power CO₂ laser sources according to glass or metal tube, sealed or semi sealed, RF or DC and CW or pulsed mode laser sources, as serious doubts arise already at the broader market definition comprising all these technologies.

²² See for example confirmed non-confidential minutes of a call with Iradion on 02 August 2016.

²³ See replies to question 12 of Q2 Questionnaire to customers.

²⁴ See replies to question 10 of Q1 Questionnaire to competitors, replies to questions 11, 14, 15 and 16 of Q2 Questionnaire to customers and replies to, questions 14, 16, 17 and 18 of Q3 Questionnaire to laser system customers.

²⁵ See replies to question 9 of Q1 Questionnaire to competitors.

IV.2.2. *Product market definitions for ultra-fast lasers*

- (36) Ultra-fast ("UF") or ultra-short pulse ("USP") lasers generate light pulses with extremely short durations, from a few femtoseconds (10-15 f-seconds)²⁶ to a few picoseconds (10-11 p-seconds).²⁷ UF lasers are used in commercial applications but also in the scientific and research applications. UF lasers cut, drill and structure extremely sensitive materials with micron-scale precision and are therefore ideal tools for applications in the electronics, semiconductor, micro technology, and medical device manufacturing industries as well as certain clinical procedures. They are technologically sophisticated machines and are significantly higher priced (above EUR 100 000 and up to 250 000 EUR for a unit) than CO2 lasers.
- (37) In line with the Parties' submissions, the Commission considers that ultrafast lasers falls into a separate product market from CO2 lasers and lasers based on other types of laser media. For the purposes of this decision, any further sub-segmentation within ultrafast lasers can be left open. No competition concerns arise in ultrafast lasers due to Rofin's limited activities in this product so far and the existence of alternative suppliers.

IV.3. **Geographic market definition**

- (38) The Notifying Party submits that the geographic markets for all lasers are worldwide which is in line with the Commission and Bundeskartellamt precedents²⁸.
- (39) According to the Parties, lasers are principally manufactured in the US, Germany, Japan and China and are purchased by customers on a worldwide basis. The Parties submit that all major laser suppliers sell the same laser products worldwide because there are no differences in local regulatory requirements and standards and transport costs are relatively low. Furthermore, the Parties submit that prices do not differ significantly in the different geographic areas.
- (40) The majority of respondents to the market investigation agreed that the relevant geographic market for CO2 laser sources should be worldwide.²⁹ This is based on the fact that most European and North American laser source and laser system manufacturers replying to the questionnaire market their products worldwide, under the same brand name and applying the same prices. Respondents reported that transport costs were low.
- (41) Some answers indicated however that the relevant geographic market could exclude China; half of the respondents reported³⁰ high customs duties hindering

²⁶ Femto- is a unit prefix (symbol f) in the metric system denoting a factor of 10^{-15} .

²⁷ Pico-, likewise, is a unit prefix (symbol p) in the metric system denoting a factor of 10^{-12} .

²⁸ Case M.2781 – Northrop Grumman/TRW, para. 56 where it was submitted that the geographic market for laser systems used in commercial applications should be worldwide in scope; BKartA, B 7 – 97/06, Coherent/Excel, paras. 70-71.

²⁹ See replies to question 14 of Q1 Questionnaire to competitors, replies to question 18 of Q2 Questionnaire to customers and replies to, question 20 of Q3 Questionnaire to laser system customers.

³⁰ See replies to question 10 of Q1 Questionnaire to competitors, replies to question 23 of Q2 Questionnaire to customers and replies to, questions 14, 16, 17 and 18 of Q3 Questionnaire to laser system customers

exports especially into China. Additionally, nearly all respondents confirmed that they or their customers would not source from China³¹, and rather do so from Europe and North-America. Only roughly half of the responding competitors and customers thought that Chinese manufacturers were exerting competitive pressure on prices in low-power CO2 lasers at all.³²

- (42) However, it is not necessary to conclude whether the relevant geographic market for CO2 laser sources is worldwide or worldwide excluding China, as serious doubts arise with respect to low power CO2 laser sources in both respects.

V. COMPETITIVE ASSESSMENT OF LOW-POWER CO2 LASERS

- (43) The Parties' activities give rise to horizontally affected markets in relation to low-power CO2 lasers.

V.1. The Notifying Party's views

V.1.1. Market shares and main competitors

- (44) According to the market share estimates submitted by the Parties for the power range 0-999W, the Transaction would bring together the current number one, Coherent, and number three, Rofin, with a combined worldwide market share of [40-50]%. The market shares of the Parties and their competitors are set out in Table 1.

Table 1. The Parties' market shares (by value, 2015) in the below 1kW CO2 segment

	Worldwide		EEA	
	Revenue mUSD	Share	Revenue mUSD	Share
Coherent	[...]	[20-30]%	[...]	[20-30]%
Rofin	[...]	[10-20]%	[...]	[20-30]%
Combined	[...]	[40-50]%	[...]	[40-50]%
Synrad	[...]	[20-30]%	[...]	[20-30]%
El En	[...]	[0-5]%	[...]	[5-10]%
Iradion	[...]	[0-5]%	NA	NA
Universal	[...]	[0-5]%	NA	NA
Coding system manufacturers (Videojet, Markem-Imaje, Han's Lasers)	[...]	[5-10]%	[...]	[5-10]%
Others (including Chinese suppliers)	[...]	[20-30]%	[...]	[5-10]%
Total	300.8	100%	80.8	100%

Source: the Parties

³¹ See replies to question 22 of Q1 Questionnaire to competitors, replies to questions 20 and 25 of Q2 Questionnaire to customers, and replies to question 27 of Q3 Questionnaire to laser system customers.

³² See replies to question 23 of Q1 Questionnaire to competitors, replies to questions 26 of Q2 Questionnaire to customers and replies to, question 33 of Q3 Questionnaire to laser system customers.

- (45) The Notifying Party argues that, in any event, post-Transaction customers will still have ample choice of high quality low power CO₂ lasers from a number of suppliers, in particular from Synrad, El.En, Iradion, Universal and FEHA:
- a. The Parties argue that Synrad is a strong competitive force as the largest competitor with an installed base of 200 000 lasers and a CO₂ laser portfolio in the 10-400W range. The Parties submit that Synrad is Rofin's closest competitor as most of Rofin's customers who double-source usually do not source from Coherent as a second supply, but from Synrad the Parties allege. According to the Parties, this can be seen in the customer lists submitted by them. The Parties note further that the recently launched pulsed lasers enable Synrad to compete much more fiercely with them.
 - b. El.En, an Italian vertically integrated laser source and laser system manufacturer active since 1981, is submitted by the Parties as being a strong and experienced competitor in low power CO₂ lasers between 150W and 850W. The Parties claim that El.En has a special competitive advantage offering blade lasers between 350W and 850W that are the same size, which, according to the Parties results in important cost savings for system integrators. The Parties submit further, that although vertically integrated, El.En sells lasers also on the merchant market.
 - c. The US-based Iradion is, according to the Parties, a particularly innovative competitor on the market, having introduced CO₂ lasers with ceramic optical resonator for the power ranges 40W-500W. These need very little maintenance and are generally longer lived, thus saving significant costs to integrators and end customers.
 - d. Universal is a laser system manufacturer that vertically integrated by starting in house laser source production some 15 years ago. The Parties claim that Universal's CO₂ portfolio is broad, extending up to a power range of 500W and that Universal offers distinctive products such as a 'hybrid' laser that integrates both CO₂ and fibre laser at the same time.
 - e. The Parties submit further that the German mid-sized enterprise FEHA also has two series of low power CO₂ lasers in many power ranges and offers worldwide service and maintenance.
- (46) Moreover, the Parties believe that additional competition in low power CO₂ lasers is generated by several so-called “coding manufacturers”³³, including Videojet, Epilog and Markem-Imaje, which specialize in marking applications, and potentially from a number of other vertically integrated OEMs, such as Kern Electronics, Han’s Laser, Wuhan Golden, MACSA, Taufenbach, Lumenis, Alma Laser, Aesculight, Angiodynamics Inc., PLC Systems, Inc., and Deka.

³³ Laser coding manufacturers refer to the suppliers of laser tools which apply a code, (including bar codes), dates and other variable or unique information to a package or transit container. There is a whole range of machines and equipment carrying out these functions, from simple mechanical stamps or over-printers to sophisticated ink jet and laser coders applying computer generated data. These machines are usually attached to a larger packaging machine such as a cartoner, filler or wrapper. Modern ink jet and laser coders can be programmed to carry a large amount of variable information such as lot number, date code; sequential coding based on a unique serial number which is recorded in a secure database.

V.1.2. Competition from Chinese suppliers

- (47) In the Parties' view, one of the most significant drivers influencing competition in CO2 lasers is the increasing competition from Chinese/Asian laser manufacturers, which put pressure on prices charged by CO2 laser suppliers in Europe and North America. The Parties list a number of Chinese manufacturers (such as Beijing Reci, Chengdu WeeGiant, Jilin Yongli, Beijing EFR or Suzhou Tianhong) producing CO2 lasers based on glass tube and on metal tube designs that serve the Chinese market but also seek to expand internationally.
- (48) While the Parties are aware that Chinese lasers are mostly sold in China and that European or North American laser system manufacturers only sporadically purchase them, they hold that the competitive pressure on lasers is nevertheless there, namely from Chinese competition on the downstream laser system level: there, Chinese suppliers seem to compete more globally, putting pressure also on European and North American input prices upstream.

V.1.3. Constraints from fibre lasers and non-laser technologies

- (49) The Parties regard fibre technology as the other most significant external driver influencing competition in CO2 lasers. Fibre has some advantages (first of all cost), over CO2 lasers and has been expanding rapidly during the past decade. Although the Parties acknowledge that fibre technology is not yet ideal for marking or coding of materials such as wood, paper or fabrics, they believe it to be only a matter of time until full substitution, considering the progress made so far and the continued R&D efforts.³⁴
- (50) The Parties also regard non-laser technologies as competitive constraints for CO2 lasers. In some instances, they explain, laser cutting can be substituted by mechanical cutting, which creates pressure on laser prices. The Parties submit that, as a result, non-laser technologies can exert strong competitive constraints on laser-based materials processing applications.

V.1.4. Closeness of competition

- (51) The Parties claim that Coherent and Rofin are not each other's closest competitors as they offer different products: First, Coherent allegedly focuses on CO2 lasers with a power output below 99W for which Synrad is its closest competitor. Second, Coherent has no low-power CO2 lasers above 400W, whereas Rofin's low-power CO2 lasers start at 100W and go up to 650W; therefore, the Parties claim that El.En is Rofin's closest competitor as El.En covers the same power range as Rofin.
- (52) Furthermore, the Parties submit that their low-power CO2 lasers serve different applications and that, accordingly, there are only [...] common customers in their respective top 50 customers lists.

V.1.5. Other competitive constraints on CO2 lasers

- (53) The Parties also argue that most customers are large and sophisticated OEMs with significant countervailing buyer power. For Coherent the Parties describe that [over

³⁴ E.g. the development of the 2µm fibre laser seems to bring a new wave of substitution of CO2 for fibre.

half] of the turnover made with low-power CO2 lasers were achieved with [fewer than ten] customers.

- (54) Furthermore, the Parties claim that customers could integrate vertically and start producing lasers themselves as there are already some companies producing both lasers and laser systems (e.g. El.En, Epilog or Universal).
- (55) The Parties add that should the merged entity try to raise prices of CO2 lasers, laser system manufacturers that are currently vertically integrated could respond by expanding production of lasers and entering the merchant market.
- (56) The Parties reckon that apart from the R&D costs, there are no high barriers to entry; they claim that production costs are not significant and that it is not essential to have a global distribution network or reach high economies of scale. Long term customer contracts are rare. Therefore, new competitors could also easily emerge.

V.2. Results of the market investigation and the Commission's assessment

V.2.1. Market shares and competitors

V.2.1.1. All low-power CO2 lasers

- (57) According to the Parties' estimates, set out in Table 1 in paragraph (44), the Parties' combined market shares at the worldwide level are [40-50]%. They are followed by competitors Synrad ([20-30]%), El.En ([0-5]%), Iradion ([0-5]%) and Universal ([0-5]%). Furthermore, the Parties submit that they compete with coding system manufacturers, among them Videojet and Markem-Imaje, (together [10-20]%) and other suppliers, among them Chinese manufacturers, (together [20-30]%).
- (58) However, the investigation revealed that these market shares underestimate the Parties' actual position on the market for low-power CO2 lasers for the following reasons.
- (59) First, market share figures provided by the Parties seem to take into account not only merchant market sales but also internal sales of vertically integrated manufacturers such as El.En and Universal which are both vertically integrated. Therefore, the market shares of these competitors are presumably substantially lower and the overall market smaller than estimated by the Parties.
- (60) Second, there are indications that the Chinese laser source manufacturers exert limited competitive pressure on the Parties' business, mainly for quality reasons (for more see paragraphs (75) to (77)).
- (61) Third, market participants' estimates³⁵ are systematically higher for the Parties' market shares ranging from 60% to monopoly in CO2 lasers.

³⁵ See confirmed non-confidential minutes of a call with El.En on 03 August 2016; confirmed non-confidential minutes of a call with IGP on 04 August 2016 and confirmed non-confidential minutes of a call with Trumpf on 03 August 2016.

- (62) Fourth, some of the CO2 laser competitors as presented by the Parties do not compete on par with the Parties or compete only in a smaller segment of low-power CO2 lasers:
- a. Although Synrad is indeed a strong competitor which was identified by many customers as their first choice after either Rofin or Coherent³⁶ the Commission has also been made aware that Synrad's CO2 lasers were less reliable and tended to present quality issues in the higher powers.³⁷ Further, most of Synrad's products are situated in the below 100W range.
 - b. While El.En has a product portfolio as broad as the Parties' and is considered⁴ to be a strong competitor, particularly in the upper power ranges. However, as a vertically integrated undertaking, it appears to focus primarily on laser systems and less on the sales of individual laser sources.³⁸ Also, customers pointed to some recurring quality issues in the case of El.En. El.En considers that it could potentially expand capacity in lasers³⁹. Yet, its market share is still very low compared to the Parties. It thus appears unlikely that it could impose a credible competitive constraint on the Parties in the near future.
 - c. Another vertically integrated actor, Universal, has been reported by respondents to be particularly strong in the lower power segments only, principally under 150W. Moreover, Universal does not believe it competes with Coherent and Rofin, the latter serving industrial customers and positioning their products in a much higher price category than Universal. In Universal's view⁴⁰, the lower end of the Parties' products and the top end of Universal's portfolio overlap only minimally. Universal does not consider the CO2 laser business as its growth business. It sees itself competing more in laser systems than sources and considers Trotec, Gravograph, Epilog and GCC as its main competitors.
 - d. Iradion is a relatively new entrant to the CO2 laser source business and manufactures a much more limited range of power levels than the Parties up to a maximum of 250W. Iradion was indeed mentioned by respondents as innovative with long life ceramic tube CO2 lasers that require practically no maintenance. Iradion was nevertheless not seen as competing on par with the Parties due to the lack of a worldwide sales and support network⁴¹. Customers, when asked whether Iradion could be an alternative to the Parties, also mentioned some specific weaknesses, such as low pulsing capacity and the lack of water cooled product versions.⁴² Iradion itself confirmed⁴³ that the lack of their pulsed lasers was a handicap for competing with the Parties.

³⁶ See replies to question 41 of Q2 Questionnaire to customers.

³⁷ E.g. see confirmed non-confidential minutes of a call with Jeanologia on 08 August 2016, confirmed non-confidential minutes of a call with GMI on 22 September 2016.

³⁸ E.g. see confirmed non-confidential minutes of a call with Iradion on 02 August 2016.

³⁹ See El.En's reply to question 55 of Q1 Questionnaire to competitors.

⁴⁰ See confirmed non-confidential minutes of a call with Universal on 28 September 2016.

⁴¹ See replies to questions 39 and 40 of Q2 Questionnaire to customers.

⁴² See replies to question 30 of Q2 Questionnaire to customers.

⁴³ See confirmed non-confidential minutes of a call with Iradion on 02 August 2016.

- e. FEHA⁴⁴ only manufactures glass tube CO2 lasers that use the so-called "slow-flow" system, which is an open system with an external gas bottle. FEHA considers these as niche-products that are employed for very specific applications and which represent less than 1% of the total market for CO2 lasers according to FEHA's estimates. Furthermore, FEHA has difficulties to provide services worldwide.
 - f. Coding manufacturers Markem Imaje and VideoJet flagged by the Parties as smaller competitors turned out to produce CO2 laser sources only below 100W and only for captive use.⁴⁵ They do not supply the merchant market at all, unless with some spare parts on their own installed base. Competitors were either not aware of them as competitors or regarded them as customers.⁴⁶
- (63) The Commission has collected merchant market sales data for low-power CO2 lasers from a number of the Parties' competitors. When those actual sales are taken into account (and the market size is adapted accordingly), the Parties' combined market share is higher, but still in the 40-50% range at the worldwide level. When sales of Chinese suppliers are removed (due to indications that the market could be worldwide excluding China, see paragraph (41), and that quality differences exclude Chinese suppliers from supplying European customers, see paragraphs (75) to (77)), the Parties' combined market share increases to 50-60%.
- (64) The Commission's investigation has shown, therefore, that the Parties' combined market position in the market for low-power CO2 lasers is strong (at 40-60%) and that none of their smaller competitors mentioned above could exercise a credible competitive constraint on the Parties.

V.2.1.2. Sub-segment of 100-999W low-power CO2 lasers

- (65) The Parties argue that the relevant product market should include all power levels below 1kW. However, as outlined above in paragraphs (19) to (28), there are strong indications supporting a narrower market definition that encompasses a power range of 100W-999W ('mid-power segment'). It is in line with such segmentation, that Rofin does not offer the full range of CO2 lasers from 0-999W, but focuses exclusively on CO2 lasers above 100W. Furthermore, the vast majority of the Parties' worldwide and EEA-wide low-power CO2 revenues come from the 100-999W segment (worldwide: [...] of combined revenues in low-power CO2; EEA: [...]).

⁴⁴ See confirmed non-confidential minutes of a call with FEHA on 23 September 2016.

⁴⁵ See VideoJet's reply to question 25 of Q1 Questionnaire to competitors.

⁴⁶ See replies to questions 31 and 32 of Q1 Questionnaire to competitors and replies to questions 30 and 31 of Q2 Questionnaire to customers.

- (66) The market shares for this mid-power segment, as submitted by the Parties on request of the Commission, are shown in Table 2 below. The Transaction would in this mid-power segment combine the largest two suppliers and consequently lead to very high combined market shares:

Table 2. The Parties' market shares (by value, 2015) in the below 100-599W CO2 segment

	Worldwide		EEA	
	Revenue mUSD	Share	Revenue mUSD	Share
Coherent	[...]	[30-40]%	[...]	[30-40]%
Rofin	[...]	[10-20]%	[...]	[30-40]%
Combined	[...]	[50-60]%	[...]	[60-70]%
Synrad	[...]	[10-20]%	[...]	[10-20]%
El En	[...]	[0-5]%	[...]	[10-20]%
Iradion	[...]	[0-5]%	NA	NA
Universal	[...]	[0-5]%	NA	NA
Coding system manufacturers (Videojet, Markem-Imaje, Han's Lasers)	[...]	[0-5]%	NA	NA
Others (including Chinese suppliers)	[...]	[20-30]%	[...]	[5-10]%
Total	173.5	100%	45.1	100%

Source: the Parties

- (67) According to the Parties' estimates, combined market shares for 100-999W⁴⁷ CO2 laser sources are significant. Synrad (up to [10-20]%) would remain the most important competitor of the Parties, followed by smaller competitors like El.En, Iradion and Universal with a market share between [0% and 10]%. Thus, on a hypothetical market for 100-999W CO2 lasers, the Transaction would reinforce the market leader which would post-Transaction be at least four times the size of Synrad, the next largest competitor.
- (68) However, the investigation revealed that even these share data would underestimate the Parties' actual position on the 100W-999W CO2 market for reasons similar to the ones already set out for the overall low-power CO2 lasers in section V.2.1.1:
- (69) First, market share figures provided by the Parties seem to take into account not only merchant sales but also internal sales of vertically integrated manufacturers.
- (70) Second, there are strong indications that the Chinese laser source manufacturers do not form part of the relevant market for lasers of 100-999W, thus their alleged sales should not be included (for more, see paragraphs (75) to (77)).
- (71) Third, third party estimates of the Parties' market shares⁴⁸ appear consistently higher than the data furnished by the Parties, in particular as regards the 100-999W power range.

⁴⁷ 100-599W, as provided by the Parties.

⁴⁸ See confirmed non-confidential minutes of a call with El.En on 03 August 2016; confirmed non-confidential minutes of a call with IGP on 04 August 2016 and confirmed non-confidential minutes of a call with Trumpf on 03 August 2016.

- (72) Fourth, some of the CO2 laser competitors as presented by the Parties for the 100-999W segment do not compete on par with the Parties or compete only in a smaller segment of the 100-999W power range:
- a. As set out in paragraph (62)a, customers consider that Synrad's CO2 lasers in the above 100W range are less reliable and have some quality issues.⁴⁹
 - b. El.En appears to be primarily focused rather on laser systems and less on the sales of individual lasers⁵⁰ and customers noted some recurring quality issues, as set out in paragraph (62)b.
 - c. The vertically integrated Universal was reported by respondents to be particularly strong in the lower power segments only, principally under 150W. This was confirmed by Universal itself⁵¹ identifying the 25W-75W power range as the most representative for their products. While Universal claimed that indeed a CO2 laser source with maximum output of 500W had recently been developed, the experience in the higher power ranges of Universal is still limited as it has sold such new products so far only in low numbers and only for research purposes. Furthermore, Universal does not consider the CO2 laser source business as their growth business. Moreover, and as set out in paragraph (62)c, Universal does not believe it competes with Coherent and Rofin.
 - d. Iradion manufactures a much more limited range of power levels than the Parties and up to a maximum of 250W. As set out in paragraph (62)d, it was not seen as competing on par with the Parties due to the lack of a worldwide sales and support network, lack of pulsing capacity and lack of water cooled product versions.
 - e. FEHA only manufactures a niche glass tube CO2 laser that uses the so-called "slow-flow" system and FEHA has difficulties to provide services worldwide, as set out in paragraph (62)e.
 - f. Coding manufacturers Markem Imaje and VideoJet do not supply the merchant market with lasers above 100W, as set out in paragraph (62)f.
- (73) The Commission has collected merchant market sales data for low-power CO2 lasers in the 100-999W segment from a number of the Parties' competitors. When those actual sales are taken into account (and the market size is adapted accordingly), the Parties' combined market share is higher, but still in the 50-60% range at the worldwide level. When sales of Chinese suppliers are removed (due to indications that the market could be worldwide excluding China, see paragraph (41), and that quality differences exclude Chinese suppliers from supplying European customers, see paragraphs (75) to (77)), the Parties' combined market share increases to 70-80%.

⁴⁹ E.g. see confirmed non-confidential minutes of a call with Jeanologia on 08 August 2016; confirmed non-confidential minutes of a call with GMI on 22 September 2016.

⁵⁰ E.g. see confirmed non-confidential minutes of a call with Iradion on 02 August 2016.

⁵¹ See confirmed non-confidential minutes of a call with Universal on 28 September 2016.

- (74) The Commission's investigation has shown, therefore, that the Parties' combined market position in the market for low-power CO₂ lasers in the 100-999W range is strong (at 50-80%) and that none of the smaller competitors mentioned above could seriously constrain the Parties in the relevant market.

V.2.2. *Competition from Chinese suppliers*

- (75) Overall, the market investigation did not confirm the Parties' claim that Chinese CO₂ laser producers exert strong competitive pressure on the Parties and their European and North American competitors or that they likely will do so in the near future.
- (76) Customers report that Chinese suppliers have not visibly penetrated the EEA market as their products do not meet the quality and reliability expectations of EEA customers.⁵² Chinese producers, it was claimed, appear to be using mostly outdated technology to produce low cost and low quality products for the Chinese market, while the Parties were seen as suppliers for high-end and higher priced laser.⁵³ These customers' views are supported by the Parties' major competitors who do not consider Chinese suppliers as competitors.⁵⁴ Respondents indicated that, if anywhere, Chinese suppliers have gained a foothold only in the low-end 1-99W power range for marking applications.⁵⁵ It was further remarked that Chinese input prices were much cheaper, by several orders in magnitude, which was impossible to follow.
- (77) Moreover, less than half of the respondents⁵⁶ considered that European and North American laser system manufacturers were competing with Chinese laser system manufacturers. In addition, the Parties' market share in China is also elevated ([30-40]% in the 100-999W segment; around [50-60]% if Synrad is included) which means that a substantial number of Chinese systems manufacturers also incorporate the higher-value lasers of the Parties and Synrad in their systems.

V.2.3. *Constraints from fibre lasers and non-laser technologies*

- (78) The market investigation did not confirm the Parties' claim of (i) possible substitution of low-power CO₂ lasers by other types of lasers, mainly fibre lasers, and (ii) non-laser based technologies exerting significant competitive pressure on low-power CO₂ laser suppliers.
- (79) Although there has been a tendency towards substitution of CO₂ lasers by fibre lasers, this development appears to be limited to the high-power CO₂ lasers above 1kW. Fibre lasers proved to be a competitive constraint for high-power CO₂ lasers for the cutting and welding of thick materials or metals for example. The picture is, however, different in the low-power CO₂ segment. Low-power CO₂ lasers are used for many applications where it is technically not possible, significantly less

⁵² See replies to question 25 of Q2 Questionnaire to customers.

⁵³ See replies to questions 38, 39 and 40 of Q2 Questionnaire to customers.

⁵⁴ See replies to question 23 of Q1 Questionnaire to competitors.

⁵⁵ See replies to question 24 of Q1 Questionnaire to competitors and to question 25 of Q2 Questionnaire to customers.

⁵⁶ See replies to question 23 of Q1 Questionnaire to competitors and to question 26 of Q2 Questionnaire to customers.

efficient or not economical to substitute CO₂ lasers with fibre lasers. Such applications mainly concern organic and transparent materials, such as wood, paper, textiles, glass or certain plastics.⁵⁷ In the low-power CO₂ laser segment, fibre lasers only compete with low-power CO₂ lasers for a small minority of applications, namely coding and marking applications, which concerns only CO₂ lasers at the lowest end of the power range (below 100W). For the vast majority of other applications for which low-power CO₂ technology is used, the CO₂ technology remains largely uncontested by other laser technologies including fibre lasers. Respondents to the market investigation expressed correspondingly the view that substitution of CO₂ lasers by fibre lasers has been reaching its saturation and market participants do not expect to see more substitution in the near future.⁵⁸

- (80) These findings are supported by industry reports⁵⁹ confirming that the market for low-power CO₂ lasers stabilises and will even grow. Furthermore, the Parties' internal analyses of the CO₂ market also expect [reference to internal documents]. This indicates that low-power CO₂ lasers are not expected to be replaced by fibre lasers technologies to any significant extent.
- (81) Similarly, substitution of low-power CO₂ lasers by non-laser technologies was almost unanimously ruled out by respondents to the market investigation⁶⁰ quoting a number of setbacks this would entail, notably concerning efficiency, accuracy, replicability, redundancy, speed, safety and environmental impact. Laser source customers would need to completely change business model and effectuate the corresponding investments. Often such substitution was reported as unfeasible. At the same time, industry reports and internal documents⁶¹ of the Parties all suggest that the market for materials processing is steadily growing, by [5-10]% per annum. Thus, a change of technology from laser to non-laser technology does not seem to be regarded as a reasonable option for most customers. Many participants submitted that switching to non-laser technologies (e.g. reverting to mechanical cutting or marking) would represent a step back in technological progress.

V.2.4. *Closeness of competition*

- (82) Within its investigation, the Commission found strong indications that the Parties despite their claim not to be closest competitors compete closely on the market.

⁵⁷ See replies to question 7 of Q1 Questionnaire to competitors, to question 9 of Q2 Questionnaire to customers and to, question 11 of Q3 Questionnaire to laser system customers.

⁵⁸ See replies to question 11 of Q2 Questionnaire to customers. It was noted that fibre lasers with different wavelengths (5-10 micron) are being developed; however, it is not clear when those will penetrate the market and which applications will be affected in the end. IGP expects this to happen in 5 to 10 years. See confirmed non-confidential minutes of a call with IGP on 03 August 2016 and confirmed non-confidential minutes of a call with Trumpf on 03 August 2016.

⁵⁹ Micro and Low Power Laser Materials Processing - Market Analysis and Forecast for Laser Sources and Laser Systems, by Optech Consulting, February 2016 p. 22-23.

⁶⁰ See replies to question 6 of Q1 Questionnaire to competitors, replies to questions 7 and 8 of Q2 Questionnaire to customers and replies to questions 7 and 8 of Q3 Questionnaire to laser system customers.

⁶¹ See reply to q12 of RF12 Coherent internal document [reference to internal documents].

- (83) First, Coherent's claim that it focuses its low-power CO2 business on the below 100W segment is contradicted by its sales data, which shows that [more than 50]% of its revenues stem precisely from the 100-999W segment, where the overlap with Rofin is the highest.
- (84) Second, it is true that, to a certain extent, the Parties target different customers as submitted by the Parties. That said, [...] out of Coherent's top five applications overlap with Rofin's top five applications: [...]. Moreover, the Parties' customer focus is not to be viewed statically. For example, Coherent's internal documents show that Coherent was specifically considering targeting customers for [...]⁶². More generally, Coherent seeks to increase its presence in [...], where Rofin has traditionally been stronger.⁶³ Both Parties appear well-placed to be chosen by customers for new projects which may require customization and which could lock in the customer for a while.⁶⁴
- (85) Third, while the product portfolio of the Parties is not a perfect match across the various power levels in the 100-999W segment, Coherent's internal documents show that Rofin, together with Synrad, exercised significant dynamic pressure on Coherent to develop new products: "[reference to internal documents]".⁶⁵ Conversely, Rofin's documents appear to consider Coherent as its closest rival.⁶⁶
- (86) Fourth, results of the market investigation confirmed that the Parties are seen by customers and competitors widely as closest or close competitors:
- a. Among customers, when asked in the market investigation to name the closest alternative to Coherent products, two thirds named Rofin. Many of the remaining customers saw Rofin as the second closest competitor. Conversely, when asked for the closest alternative to Rofin, an equal proportion of respondents identified Coherent as closest alternative. Respondents also affirmed that both companies' strategic positioning in terms of quality level and pricing was similar.⁶⁷
 - b. Competitors reported⁶⁸ that competition between the Parties was very high, especially so in the higher power ranges.
 - c. Coherent⁶⁹ stated not having CO2 lasers above 400W. However, respondents systematically believed Coherent had such a product and some confirmed having purchased Coherent products above 400W, up to 500W.

⁶² See Annex 17a to the Form CO, Rofin Business Summary: RSUK, Sept.2015.

⁶³ See reply to q12 of RFI2 Coherent internal document [reference to internal documents].

⁶⁴ See reply to q12 of RFI2 Coherent internal document [reference to internal documents].

⁶⁵ See reply to q12 of RFI2 Coherent internal document [reference to internal documents].

⁶⁶ See Annex 17c to the Form CO, Rofin strategy meeting and Sales notes, Business update May 2016.

⁶⁷ See replies to question 38 of Q2 Questionnaire to customers, see also confirmed non-confidential minutes of a call with GMI on 22 September 2016.

⁶⁸ See replies to question 36 of Q1 Questionnaire to competitors, confirmed non-confidential minutes of a call with Iradion on 02 August 2016.

⁶⁹ E.g. see Iradion's reply to question 29 of Q1 Questionnaire to competitors, El.En's reply to question 36 of Q1 Questionnaire to competitors, see also confirmed non-confidential minutes of a call with SEI on 02 September 2016.

- d. Respondents⁷⁰ indicated that a specific strength and competitive differentiator for both Parties was their extensive network of global sales and technical support.
- (87) To conclude, evidence gathered suggests that Rofin is a close competitor of Coherent in the overall low-power CO₂ lasers (the other close competitor being Synrad). In the 100-999W segment where Synrad is significantly weaker than Rofin, evidence gathered suggests that Rofin is an even closer competitor of Coherent.

V.2.5. *Barriers to entry and expansion*

- (88) The results of the market investigation point towards high barriers to entry and expansion on the laser market.
- (89) Competitors and customers⁷¹ explained that barriers to entry were high and that no market entry was expected in the West in the foreseeable future for the following reasons:
- (90) First, product development is lengthy and can take up to three years even for an already established supplier. A certain portfolio size is also necessary to enter the market. Iradion, the pure CO₂ player which is a relatively new entrant to the market was established in 2007 and started marketing low power CO₂ lasers up to 250W in 2010. Iradion confirmed⁷² that a further extension of its product portfolio into the higher power ranges was indeed desirable, submitted however, that the introduction of a new, 500W laser source, for instance, faced significant technical obstacles and would require additional 2-3 years at least and EUR 1.5-2 million investment. Every new power level, Iradion explained, is a new development from scratch, with very little synergies. The magnitude of investment and the difficulty of expansion were also emphasized by FEHA.⁷³
- (91) Second, economies of scale are important in view of decreasing laser prices. Trumpf underlines⁷⁴ the importance of economies of scale on this mature market and explains that it is impossible to undercut prices without scale. Product cost was seen as a key driver of competition also by Synrad.⁷⁵ Also, gaining customers faces obstacles. For a customer to switch requires investment adapting the machines to the new laser source. For that reasons many customers do not qualify two suppliers and cannot double-source.⁷⁶

⁷⁰ See replies to questions 39 and 40 of Q2 Questionnaire to customers and confirmed non-confidential minutes of a call with FEHA on 23 September 2016.

⁷¹ See replies to question 46 of Q1 Questionnaire to competitors, replies to question 46 of Q2 Questionnaire to customers, and confirmed non-confidential minutes of a call with FEHA on 23 September 2016, confirmed non-confidential minutes of a call with El.En on 03 August 2016.

⁷² See confirmed non-confidential minutes of a call with Iradion on 02 August 2016.

⁷³ See confirmed non-confidential minutes of a call with FEHA on 23 September 2016.

⁷⁴ See confirmed non-confidential minutes of a call with Trumpf on 03 August 2016.

⁷⁵ See Synrad's reply to question 43 of Q1 Questionnaire to competitors.

⁷⁶ See for instance confirmed non-confidential minutes of a call with Iradion on 02 August 2016 and confirmed non-confidential minutes of a call with Trumpf on 03 August 2016, confirmed non-confidential minutes of a call with Biebuyck on 08 August 2016.

- (92) Third, reputation and field-proven technology are key to win orders with industrial clients.⁷⁷
- (93) Fourth, contrary to the Parties' perception, most suppliers need to have a sufficiently responsive service network.
- (94) El.En submitted⁷⁸ that it could expand production of lasers, and that it even had plans to do so. Also Iradion considers expansion possible while at the same time indicating that such expansion would require substantial investment and patents, new machines and personnel. As regards the vertically integrated system manufacturers, it was noted⁷⁹ several times that they focus their competitive efforts on the laser systems and not on the sources, even though they were to some extent already active on the laser source market.
- (95) For the reasons outlined in paragraphs (89) to (94) above, entry or expansion that could challenge the merged entity's position in the near future appears unlikely. Even if competitors that are currently all significantly smaller than the Parties expanded their production it would require significant investment and time until they could become equivalent competitors to the Parties on the market and compensate for the loss of competition between the Parties.

V.2.6. *Vertical expansion of customers*

- (96) Also the possibility of vertical integration appears to be a far stretch and rather unlikely according to the results of the market investigation.
- (97) Customers have firmly stated, that they would not be able to start in-house production and that the vertically integrated companies typically started as producers of lasers and then expanded into systems and not the reverse. Universal explained⁸⁰ that they indeed expanded into the production of laser sources some 15 years ago. However, it was submitted that this was enabled by particular circumstances, as Universal's founder was a photonics expert. For firms without this particular expertise, as Universal states, vertical integration is not realistic.
- (98) Moreover, responding customers almost unanimously rejected⁸¹ the idea of starting their own production of laser sources, quoting a variety of compelling reasons, such as the long development time, R&D and financial investment needed, the risk of failure, and the problem of scale in the light of their limited demand for lasers.

V.2.7. *Customers' reactions*

- (99) A large proportion of responding customers voiced concerns about product continuity and the potential reduction of choice after the Transaction. Customers fear that the reduction of choice will be followed by a deterioration of product quality, reduced service levels and ultimately also price increases for low power

⁷⁷ See e.g. confirmed non-confidential minutes of a call with Jeanologia on 08 August 2016.

⁷⁸ See El.En's reply to question 55 of the Questionnaire to competitors.

⁷⁹ See confirmed non-confidential minutes of a call with Universal on 28 September 2016, confirmed non-confidential minutes of a call with Iradion on 02 August 2016.

⁸⁰ See confirmed non-confidential minutes of a call with Universal on 28 September 2016.

⁸¹ See replies to question 50 of Q2 Questionnaire to customers.

CO2 lasers.⁸² Customers' estimates of combined market shares for low power CO2 laser sources varied between 60 and 90%.

V.2.8. *Conclusion*

- (100) As outlined above, the Transaction would create a new clear market leader in low-power CO2 lasers with shares of 40-60%. Further, the Transaction would eliminate Rofin as Coherent's close competitor leaving only Synrad as a main competitor. There are few other alternative suppliers and they do currently not compete on par with the Parties in a market where barriers to entry and expansion are high.
- (101) As regards the segment of 100-999W, the Transaction would equally create a new clear market leader with shares of 50-80%, being four times larger than its next competitor Synrad in an already highly concentrated market where barriers to entry and expansion are high. Further, the Transaction would eliminate Rofin as a particularly close competitor of Coherent leaving only few alternative suppliers which do currently not compete on par with the Parties.
- (102) Therefore and based on the assessment set out in paragraphs (57) to (99), the Commission considers that the Transaction would significantly impede effective competition with regard to low-power CO2 lasers under any plausible market definition set out above. The Transaction therefore raises serious doubts as to its compatibility with the internal market.

VI. COMPETITIVE ASSESSMENT OF ULTRAFAST LASERS

- (103) The Parties' activities overlap horizontally in the manufacture and sale of UF laser sources and their laser source sales are vertically related to Rofin's manufacture of UF laser systems.

VI.1. The Notifying Party's views

- (104) The Notifying Party submits that neither the horizontal, nor the vertical overlap between the Parties in UF lasers leads to affected markets.
- (105) Based on the various market sizes estimated by three independent industry reports⁸³, Coherent's market share in UF lasers is between [5-10]% and [10-20]%. The Parties submit that in 2015 Rofin [...], attributing it a [0-5]% market share.
- (106) The Parties note numerous competitors in this segment, notably Trumpf, with market shares estimated between [10-20] and [20-30]%, Amplitude, with shares similar to Coherent's, and High Q and Photonics Industries, which follow closely. A number of smaller competitors, with shares of [0-5]%, are also present in this segment.
- (107) In addition, the Parties argue that Coherent and Rofin focus on different applications, Coherent on the scientific, Rofin more on the industrial.

⁸² See replies to question 55 of Q2 Questionnaire to customers and also confirmed non-confidential minutes of a call with Innolas on 23 September 2016, etc.

⁸³ Optech Consulting "Micro and low power laser materials processing" 2015, Strategies Unlimited, "Ultrafast Lasers – Trends and five-year forecast Strategies Unlimited, Worldwide Market for lasers 2016.

- (108) As concerns Rofin's sales of laser systems, the Parties estimate their market share to be [5-10]% worldwide. Rofin is vertically integrated, however, [...].

VI.2. Results of the market investigation and Commission's assessment

- (109) Coherent markets laser sources only, whereas Rofin manufactures UF laser systems, branded StarFemto and StarPico, and has recently started selling laser sources separately as well.
- (110) A market investigation was carried out in order to verify the Parties' market shares and positions.
- (111) Respondents confirmed that although Rofin was not selling laser sources en mass, it had the capacity to do so and was a credible player on the UF market. Respondents saw the Transaction as a chance for further vertical integration that will enhance the Parties' competitiveness in UF laser systems. In the area of UF lasers it was noted⁸⁴ that start-ups, although there exist some on the market, are difficult to accept, as the machines are very high value, capital intensive to manufacture and long term support needs to be guaranteed. Therefore, the laser source manufacturer needs to be a financially solid, long established player. The Parties' global reach was again noted as a distinctive competitive advantage that many other manufacturers did not have.⁸⁵
- (112) However, in general, customers saw enough competition remaining on the market post-Transaction.⁸⁶
- (113) In addition, the turnover figures competitors reported⁸⁷ for their own sales of UF lasers were systematically higher than what the Parties estimated, which indicates that in the case of UF lasers the Parties may have overestimated their own market shares. Respondents mostly identified the vertically integrated competitor Trumpf as the largest player and noted the presence of numerous other competitors.
- (114) Rofin's internal documents showed that Rofin [...]⁸⁸.
- (115) Consequently, the concentration notified does not raise serious doubts as to its compatibility with the internal market concerning the horizontal overlaps between the Parties' UF laser businesses.

VII. VERTICAL LINKS AND CONGLOMERATE CONSIDERATIONS

- (116) Rofin also produces laser systems, including CO2 laser systems, for which there is a vertical relationship with the Parties' production of low-power CO2 lasers. Due to the Parties' high market shares in low power CO2 lasers, this vertical relationship leads to affected markets. If the relevant product market is defined more narrowly,

⁸⁴ See e.g. confirmed non-confidential minutes of a call with Innolas on 23 September 2016, confirmed non-confidential minutes of a call with Sauer on 26 September 2016.

⁸⁵ See e.g. confirmed non-confidential minutes of a call with Innolas on 23 September 2016 and confirmed non-confidential minutes of a call with Sauer on 26 September 2016.

⁸⁶ See replies to email inquiry on the impact of the Transaction on the ultra-fast laser market sent on 09 September 2016.

⁸⁷ See replies to email inquiry on ultra-fast laser sales and market size sent on 26 September 2016.

⁸⁸ See replies to email inquiry on ultra-fast laser sales and market size sent on 26 September 2016.

encompassing the power ranges 100-999W no vertical relationship is created between the Parties' activities.

- (117) The Parties explain, that Rofin produces only one laser system⁸⁹ with low power CO2 lasers, for which it uses 30W CO2 laser. Rofin does not produce any CO2 lasers below 100W [...]. The Parties submit that both Rofin's sales of CO2 laser systems and [...].
- (118) The market investigation did not indicate any concern regarding input or customer foreclosure as a consequence of the Transaction.⁹⁰
- (119) Consequently, the concentration notified does not raise serious doubts as to its compatibility with the internal market concerning the vertical relationship between the Parties' low power CO2 laser businesses and Rofin's production of low power CO2 laser systems,
- (120) Many respondents considered it beneficial and procompetitive that the Parties combine their product offerings across the different laser models. However, some market participants alluded⁹¹ to conglomerate concerns by stating that the Parties could become dominant by combining their broad portfolios of different types of lasers and could bundle the products.
- (121) Yet, as stated in the Non-Horizontal Merger guidelines⁹², the fact that the merged entity will have a broad portfolio of products does not, as such, raise competition concerns. The so called 'one-stop-shopping' might be preferred by customers for reasons such as saving on transaction costs.
- (122) In order for conglomerate non-coordinated effects to arise, the Parties must have the ability and the incentive to foreclose their competitors by bundling or tying. Furthermore, it has to be assessed whether a foreclosure strategy would have significant detrimental effect on competition, thus causing harm to consumers.⁹³
- (123) In the present case, respondents to the market investigation raised the increased power to bundle different products as a potential impact of the Transaction. However, foreclosure of competitors through bundling is conceivable only if there is a large common pool of customers for the individual products concerned. Yet, the power of the Parties post-Transaction to bundle remains limited as different types of lasers, such as fibre, CO2, ultra-fast, etc. are suited for specific and different applications. Customers for CO2 lasers do not necessarily buy other types of laser sources. There are some indications that certain customers may have a preference purchasing CO2 lasers of various power levels from the same supplier,

⁸⁹ Rofin's laser system is called Powerline C30, it marks results on plastics and glass as well as on organic materials like wood, paper and leather.

⁹⁰ See replies to question 59 of Q1 Questionnaire to competitors, replies to questions 55-60 of Q2 Questionnaire to customers and questions 51-54 of Q3 Questionnaire to laser system customers.

⁹¹ See Trumpf's and Synrad's reply to question 55 of Q1 Questionnaire to competitors. Innolas Photonic's reply to question 59 of Q2 Questionnaire to customers.

⁹² Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2008/C 265/07, paragraphs 92 and 104.

⁹³ Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings, 2008/C 265/07, paragraphs 93-94.

e.g. if their systems are customised for the design of one specific supplier.⁹⁴ However, there is no clear evidence that this concerns the majority of customers or that this applies across various types of laser sources.

- (124) This is supported by the fact that suppliers are not the same across different types of lasers; e.g. IGP and Trumpf are not active in low power CO₂ lasers but are reported to be the leaders on fibre and ultra-fast lasers respectively, where the Parties are present but much weaker than the leading competitors.
- (125) The majority of customers⁹⁵ responding to the market investigation explained to prefer to multi-source the CO₂-lasers needed if multi-sourcing is possible. It appears, thus, unlikely that the Parties would be able to successfully bundle their products across different types of lasers as already within one type of laser customers try to multi-source, e.g. to encourage competition, security of supply etc.
- (126) Consequently, the concentration notified does not raise serious doubts as to its compatibility with the internal market concerning the vertical link between the Parties with respect of low power CO₂ lasers. Furthermore, the concentration notified does not raise serious doubts as to its compatibility with the internal market concerning the combination of the Parties' product portfolios, as anti-competitive conglomerate effects are unlikely to occur.

VIII. REMEDIES

VIII.1. Framework for the assessment of the commitments

- (127) Where a concentration raises serious doubts as regards its compatibility with the internal market, the Parties may undertake to modify the concentration so as to remove the grounds for the serious doubts identified by the Commission.
- (128) As set out in the Commission's Remedies Notice⁹⁶, such commitments have to eliminate the competition concerns entirely, and have to be comprehensive and effective from all points of view.
- (129) In assessing whether commitments will maintain effective competition, the Commission considers all relevant factors, including the type, scale and scope of the proposed commitments, with reference to the structure and particular characteristics of the market in which the Transaction is likely to significantly impede effective competition, including the position of the Parties and other participants on the market.⁹⁷

VIII.2. Commitments submitted by the Notifying Party

- (130) In order to render the concentration compatible with the internal market, the Notifying Party has modified the notified concentration by entering into commitments.

⁹⁴ See e.g. confirmed non-confidential minutes of a call with Iradion on 02 August 2016.

⁹⁵ See replies to question 34 of Q2 Questionnaire to customers.

⁹⁶ Commission Notice on remedies acceptable under Council Regulation (EC) No 139/2004 and under Commission Regulation (EC) No 802/2004 (OJ C 267, 22.10.2008, p. 1-27).

⁹⁷ Remedies Notice, paragraph 12.

- (131) The Notifying Party submitted three successive sets of commitments in order to address the serious doubts raised by the Transaction. The Parties first submitted remedies on 5 October 2016, which were improved through a revised remedy proposal on 11 October 2016 ("Initial Commitments"). After the Commission gathered the views of market participants on the Initial Commitments ("market test"), and informed the Parties of the remaining concerns, the Notifying Party submitted the Final Commitments on 19 October 2016.
- (132) The Commission considers the Final Commitments sufficient to ensure that the Transaction no longer raises serious doubts as to its compatibility with the internal market.

VIII.3. Initial Commitments

- (133) In the commitments submitted on 5 October 2016, the Notifying Party proposed to divest Rofin's entire global CO2 laser manufacturing for CO2 lasers of 0-999W ("the Divestment Business").
- (134) The Commission raised a number of preliminary issues which called into question already prima facie the viability and competitiveness of the Divestment Business concerning the scope of proposed transfers of technology and intellectual property rights, sufficient coverage of the sales and after-sales network, and the scope of the transitional arrangements. Subsequently, the Notifying Party submitted a second set of commitments on 11 October 2016 which built on overall approach of the commitments dated 5 October, and brought a number of modifications to address the issues raised by the Commission. The commitments of 5 October 2016, as amended on 11 October 2016, shall be hereinafter referred to as the Initial Commitments.

VIII.3.1. Description of the Initial Commitments

VIII.3.1.1. Overall perimeter of the Divestment Business

- (135) The Divestment Business as defined in the Initial Commitments consists primarily in Rofin's plant in Hull/UK opened in February 2016. It regroups the manufacturing of all of Rofin's low-power CO2 laser sources (0-999W) and includes also the production of a low power CO2 laser system named Multiscan. The Divestment Business also includes specific testing and repair equipment in the Rofin service centre located in [...] China and additional quality control equipment located in Rofin's facility in [...] Germany.
- (136) The Divestment Business would include (i) most of the patents it currently uses for the production of CO2 lasers, (ii) its R&D capacity related to CO2 lasers, and (iii) all of the Hull facility's personnel and IT systems. The title to the Rofin-Sinar brand would not be transferred to the Divestment Business.
- (137) The proposed divestment of the entire Rofin activities in low power CO2 laser sources removes the entire horizontal overlap in low-power CO2 laser sources of the Parties. In view of the proposals in the Initial Commitments, the Commission's assessment will focus on the issues important for the viability and competitiveness of the Divestment Business, namely the transfer of intellectual property rights and excluded assets, the sales and after-sales network, and the transitional arrangements.

VIII.3.1.2. Intellectual property rights and excluded assets

- (138) The Initial Commitments stipulate that concerning the patents relevant solely for low power CO2 laser sources (patents for a gas laser device and for mode selection technique), the Divestment Business retains exclusivity on its patented technology for the entire range of low power CO2 laser sources (up to 999W).⁹⁸ For these two patents, the merged entity would only receive an exclusive licence for CO2 laser sources of 1000W and above.⁹⁹ While the patent for an integrated pre-power amplifier, used also for non-low power CO2 lasers, would be transferred to the merged entity, the Divestment Business will receive an exclusive back-licence for the entire low-power CO2 product range up to 999W.¹⁰⁰ The Initial Commitments also clarify that the licence to patents will include “*a license to any additional tangible or intangible assets such as know-how, models or test data*”.¹⁰¹
- (139) The Initial Commitments also include a reverse carve-out of the R&D projects and patents relating to the Divestment Business' activity in [...]. Those R&D projects and patents would therefore be transferred to the merged entity under the Initial Commitments.
- (140) Finally, concerning rights to the brand, the Divestment Business would be able to continue to use the product/model names (such as "SC", "SR", OEM n iX, "Multiscan VS") but would not receive the title to the Rofin-Sinar brand for its low power CO2 laser products. The Initial Commitments however envisage an optional licence for the Divestment Business to use the Rofin brand for low power CO2 laser products for up to [...] after the divestment, but only to sell pre-branded stock and spare parts held by the Divestment Business at the moment of the divestment.

VIII.3.1.3. Sales and after sales network

- (141) The Divestment Business would retain the existing sales organisation of Rofin Sinar UK. In addition, the Initial Commitments stipulate that the staff from other parts of the Rofin-Sinar group that presently contributes significantly or in part to the Divestment Business' sales efforts would continue to do so until the divestment. The commitments also allow for additional [...] sales staff located in other Rofin locations, and [...] servicing staff from the Rofin service facility in [...] to be transferred to the Divestment Business at the purchaser's option.
- (142) To reflect the importance of the worldwide servicing network for the viability and competitiveness of the Divestment Business, the Initial Commitments [...].

VIII.3.1.4. Transitional agreements

- (143) The Initial Commitments include a number of transitional agreements, mainly for:
- a. the supply of [certain components] from the merged entity's facility in [...] for a period of [...];

⁹⁸ Retained in the Final Commitments, clause 12 of the Schedule.

⁹⁹ Modified in the Final Commitments, see paragraph (157).

¹⁰⁰ Modified in the Final Commitments, see paragraph (157).

¹⁰¹ Retained in the Final Commitments, clauses 12 and 13.

- b. the [testing of certain products] by the merged entity's facility in [...] for a period of [...]. In addition, the Commitments stipulate an option for the buyer to obtain a [licence] to any process know how or other intellectual property owned by the combined entity which is needed to enable the Divestment Business to develop [an alternative source of supply].
 - c. the supply of [certain components] from the Divestment Business to the merged entity's facility in [...] for a period of [...].
- (144) The Initial Commitments include the option that any such agreement be terminated (a) at any time, by mutual agreement, or (b) at the request of the Divestment Business at any time after [...] years from the divestment, subject to a [...] notice.
- (145) In addition, the Initial Commitments also envisage other transitional arrangements:
- a. the hosting of the Divestment Business' testing equipment in [China] and the provision of repair and testing services in [China] for a period of [...], and
 - b. support to the Divestment Business concerning marketing and IT services, for a period of, respectively, [...] from the divestment.

VIII.3.2. Assessment of the Initial Commitments

- (146) In section V, the Commission concluded that the Transaction raised serious doubts as to its compatibility with the internal market concerning non-coordinated effects due to the Parties' overlap in the market for all low power CO2 lasers, as well as in the segment for CO2 laser sources between 100W and 999W.

VIII.3.2.1. Suitability to remove the identified competition concerns

- (147) The proposed divestment of the entire Rofin activities in low power CO2 laser sources removes the entire horizontal overlap in low power CO2 laser sources of the Parties. The Commission therefore considered that the Initial Commitments were in principle suitable to remove the identified competition concerns entirely.

VIII.3.2.2. Divestment of a viable and competitive business

- (148) The Commission considered that the Initial Commitments were, subject to the views of respondents to the Commission's market test, in principle suitable to ensure the viability and competitiveness of the Divestment Business as far as the low power CO2 laser sources are concerned:
- a. concerning intellectual property rights and technology for low power CO2 lasers, the Initial Commitments ensure that the Divestment Business retains a comparable competitive position vis-à-vis the merged entity/Coherent as before the Transaction. In particular, the Divestment Business retains exclusivity over its own existing technology for the product range up to 999W. Contrary to the proposed commitments of 5 October 2016, it no longer shares its patented technology with the merged entity and retains access to the technology for the entire range of low power CO2 products.
 - b. the Commission's investigation showed that an international service and sales network is one of the strengths of Rofin's current low power CO2 laser business and it is essential for the Divestment Business to stay competitive and for the competition conditions pre-merger to be preserved. The provisions on

sales and after-sales network ensure that the divestment business will continue to have access to the sales organisation and personnel currently accounting for [a majority] of the sales of the Divestment Business. Notably, the existing sales organisation of the Divestment Business could be strengthened by the transfer of [...] sales staff, and by [...] dedicated servicing staff from Rofin's servicing facility in [...], both at the option of the purchaser.

Moreover, the Initial Commitments include an explicit additional criterion for the selection of the purchaser of the Divestment Business, which [...].

- c. concerning the terms of the transitional agreements, the Initial Commitments stipulate a duration of [...] and [...], depending on the agreement. While these periods are rather long, the purchaser will have an early termination option for the transitional agreements. The Divestment Business' independence will be further strengthened by a licence on the technology for [...] allowing to develop an alternative source of [...].

VIII.3.2.3. Potential purchasers

- (149) The requirements for the purchaser of the Divestment Business set out in the Initial Commitments correspond to the standard requirements contained in the model text for divestiture commitments of the Commission.¹⁰² They require, in particular, that (i) the purchaser must be independent of and unconnected to the Parties, (ii) the purchaser must have the financial resources, proven expertise and incentive to maintain and develop the Divestment Business as a viable and competitive force, and (iii) the acquisition by the purchaser must not be likely to create *prima facie* competition concerns nor give rise to a risk that the implementation of the commitments will be delayed.
- (150) As already mentioned in paragraph (148)b, given the relevance of the global sales and after-sales network for the viability and competitiveness of the Divestment Business, the Initial Commitments contain an additional criterion for the selection of the purchaser of the Divestment Business, [...].

VIII.3.3. Conclusion on the Initial Commitments

- (151) On the basis of the above, the Commission informed the Notifying Party of its preliminary view that the Initial Commitments were in principle capable of removing the identified serious doubts, subject to the outcome of the market test in particular on possible remaining concerns about the viability and competitiveness of the Divestment Business.

VIII.4. Final Commitments

VIII.4.1. The Commission's market test and Final Commitments

- (152) The Commission's market test indicated that the majority of respondents that took a position considered the Initial Commitments as sufficient to remove any competition concerns (75%), while around 25% of such respondents considered the proposal to be insufficient to remove serious doubts, mostly due to concerns on

¹⁰² Paragraph 17 of the model text, available at http://ec.europa.eu/competition/mergers/legislation/template_commitments_en.pdf.

viability and competitiveness of the Divestment Business.¹⁰³ None of the responding laser source customers stated that they would a priori not buy laser sources from the Divestment Business or raised concerns as to the suitability of the Divestment Business as potential supplier.

- (153) The majority of the respondents who took a position considered that the Divestment Business comprises all the key personnel, resources, supply contracts and other assets necessary for it to remain an active and independent competitive force.
- (154) Several respondents expressed an interest in purchasing the Divestment Business, subject to certain conditions and improvements, and only one company expressed an interest without further conditions. The replies from respondents to the market test on the question whether a suitable purchaser should already be active in low power CO2 lasers were balanced. On the one hand, 45% of respondents that took a view consider that it should be already active in the manufacturing of low power CO2 laser sources, on the other hand, 55% of respondents propose that the purchaser should already be active in laser sources other than low power CO2.¹⁰⁴ A number of respondents¹⁰⁵ held that laser system manufacturers would not be a suitable purchaser, as their primary interest would be to incorporate the purchased laser source technology into their own systems and not so much to compete for the supply of laser sources to other system manufacturers.¹⁰⁶
- (155) The respondents raised a number of specific concerns related to the viability and competitiveness of the Divestment Business. These concerns were relayed to the Notifying Party which in turn modified its remedy proposal and submitted a final set of commitments on 21 October 2016 ("the Final Commitments"). The Final Commitments contain a number of modifications to address the remaining concerns, which are presented and assessed in headings VIII.4.1.1 to VIII.4.1.3 below.

VIII.4.1.1. Intellectual property rights

- (156) A number of respondents to the Commission's market test¹⁰⁷ indicated that the design of the technology transfers in the Initial Commitments would impair the competitiveness of the Divestment Business. According to these respondents, the Divestment Business would be able to enter the power range above 999W (range between 1000W and 2000W), for which the demand could be growing in the next years, based on the currently used technology platform, scaled up from current power levels (650W maximum). However, the Initial Commitments envisage the grant of an exclusive licence to the merged entity for the power levels above 999W. For these power levels, the Divestment Business could therefore not use the

¹⁰³ See replies to question 1 of the questionnaire Commitments – Market Test dated 12 October 2016.

¹⁰⁴ See replies to question 17 of the questionnaire Commitments – Market Test dated 12 October 2016.

¹⁰⁵ See replies to question 16 of the questionnaire Commitments – Market Test dated 12 October 2016.

¹⁰⁶ The Commission will take into account the purchaser's profile in the purchaser approval process when assessing (i) the purchaser's proven expertise and incentive to maintain and develop the Divestment Business as a viable and competitive force, and (ii) existence of prima facie concerns associated to the purchaser.

¹⁰⁷ See replies to questions 9 and 10 of the questionnaire Commitments – Market Test dated 12 October 2016.

existing low power CO2 laser technology platform to complete the existing pipeline projects, as it would be reserved to Coherent/the combined entity which currently already offers CO2 laser sources just above 999W. According to the respondents to the market test, the exclusive licence would thus be liable to block or considerably delay the ability of the Divestment Business to extend and diversify its product offering, thus impairing its competitiveness and growth prospects.

- (157) To address these concerns, the Final Commitments stipulate that for the patents which will be retained by the Divestment Business, the merged entity will receive a non-exclusive licence for CO2 laser sources of 1000W and above. Likewise, for the integrated pre-power amplifier patent (to be transferred to the merged entity), the Divestment Business would not only receive an exclusive licence for the CO2 laser sources up to 999W, but also a non-exclusive licence for CO2 laser sources of 1000W and above.¹⁰⁸
- (158) Concerning the use of product brands, a large majority of respondents to the Commission's market test¹⁰⁹ considered that a period of at least one year is needed for the Divestment Business to effectively rebrand its low power CO2 laser portfolio, during which period it should be able to continue to use the Rofin-Sinar brand. This is, amongst others, also important for system producers, who would need to adapt their sales materials and certifications to the new brand.
- (159) In this respect, the modifications brought about by the Final Commitments include, at the option of the purchaser, a licence to the Divestment Business for the use of the brand "Rofin-Sinar Hull" for the sales of low power CO2 laser sources for a period of up to [...].¹¹⁰ Thus, the licence would no longer be limited to pre-branded stock and spare parts.

VIII.4.1.2. Carbon monoxide laser project

- (160) The Initial Commitments envisage a transfer of the Rofin-Sinar UK's project to develop a carbon monoxide (CO) laser source. Certain respondents to the Commission's market test however spontaneously raised concerns about the transfer of such CO laser technology to Coherent.¹¹¹ A respondent, for example, observed that CO2 laser and CO laser technology are closely related, not only having a similar machine design and engineering know-how, but also share similar applications and customer groups. The respondent expects the CO segment to grow at the expense of the CO2 technology. According to the aforementioned respondents, the transfer of the CO laser technology to the merged entity would limit the ability of the Divestment business to diversify its product portfolio and thus impair its competitiveness.

¹⁰⁸ Final Commitments, clauses 12 and 13 of the Schedule.

¹⁰⁹ See replies to question 12 of the questionnaire Commitments – Market Test dated 12 October 2016.

¹¹⁰ Final Commitments, clause 15 of the Schedule.

¹¹¹ See replies to questions 1 and 20 of the questionnaire Commitments – Market Test dated 12 October 2016.

- (161) To address this concern, the Final Commitments abandon the transfer to the merged entity of the project to develop CO technology, which will thus remain with the Divestment Business.¹¹²

VIII.4.1.3. Transitional supply agreements

- (162) Concerning [...] DC power supplies, for which the Initial Commitments only offered a transitional supply agreement, some respondents to the Commission's market test¹¹³ indicated that, due to certain product requirements (for example, use in humid or high temperature environments), such technology is not necessarily widely available on the market and the product development is rather lengthy. A respondent suggested that the Divestment Business should be offered an optional licence for such technology, in line with that for [...].
- (163) The Final Commitments stipulate an option for the buyer to obtain a fully-paid non-exclusive licence to any know how or other intellectual property owned by the combined entity which is needed to enable the Divestment Business to develop an alternative source of supply for [...] DC power supplies.

VIII.4.2. Assessment of the Final Commitments

- (164) The Commission considers that, in addition to removing the identified competition concerns entirely, the Final Commitments address the outstanding issues related to the viability and competitiveness of the Divestment Business:
- a. Concerning intellectual property rights and technology, the Final Commitments now remove the remaining limitations for the Divestment Business to use its existing technology in the development of products at 1000W and above, and abandon the transfer of the CO laser project to the combined entity. Consequently, the commitments preserve the competitiveness and viability of the Divestment Business by securing the full ability to extend its product offering going forward.
 - b. Concerning the transitional period for rebranding, the Commission notes that the majority of respondents to the Commission's market test indicated that at least one year would be needed for the Divestment Business to rebrand its low power CO₂ lasers. The Commission nonetheless considers that a licence to use the "Rofin Sinar Hull" brand for up to [...] from the Divestment as proposed in the Final Commitments is sufficient. Firstly, the terms of the licence have been strengthened: the duration of the licence is increased from [...] and the licence is no longer limited to the existing stock of products branded before the divestment, but to all products sold during the [...] period. Secondly, the Divestment Business is facing sophisticated buyers with a good knowledge of the laser source market, who are often regular or repeat buyers and thus have an established relationship with the laser source supplier. Thirdly, while the customers may need additional time to adapt the product documentation and certificates due to the rebranding of the laser sources integrated in the laser systems they produce, such adaptations do not appear to be complex and

¹¹² The project no longer appears on the list of excluded assets in Section 3 of the Schedule to the Final Commitments.

¹¹³ See replies to questions 4 to 6 of the questionnaire Commitments – Market Test dated 12 October 2016.

requiring long lead times. For these reasons, the Commission considers that the [...] period is sufficiently long to allow the Divestment Business the time to effectively rebrand its products.

- c. Concerning the transitional agreements, the Final Commitments further strengthen the independence of the Divestment Business by complementing the guarantees for continued supplies of [...], allowing the Divestment Business to develop an independent source of supplies.

VIII.4.3. Conclusion on the Final Commitments

- (165) For the reasons outlined above, the Final Commitments entered into by the undertakings concerned are sufficient to eliminate the serious doubts as to the compatibility of the Transaction with the internal market.
- (166) Under the first sentence of the second subparagraph of Article 6(2) of the Merger Regulation, the Commission may attach to its decision conditions and obligations intended to ensure that the undertakings concerned comply with the commitments they have entered into vis-à-vis the Commission with a view to rendering the concentration compatible with internal market.
- (167) The fulfilment of the measures that give rise to the structural change of the market is a condition, whereas the implementing steps which are necessary to achieve this result are generally obligations on the parties. Where a condition is not fulfilled, the Commission's decision declaring the concentration compatible with the internal market is no longer applicable. Where the undertakings concerned commit a breach of an obligation, the Commission may revoke the clearance decision in accordance with Article 6(3) of the Merger Regulation. The undertakings concerned may also be subject to fines and periodic penalty payments under Articles 14(2) and 15(1) of the Merger Regulation.
- (168) The commitments in section B of the Final Commitments of the Annex constitute conditions attached to this decision, as only through full compliance therewith can the structural changes in the relevant markets be achieved. The other commitments set out in the Annex constitute obligations, as they concern the implementing steps which are necessary to achieve the modifications sought in a manner compatible with the internal market.
- (169) Therefore full text of the Final Commitments is attached as Annex to this Decision and forms an integral part of it.

IX. CONCLUSION

- (170) For the above reasons, the Commission has decided not to oppose the notified operation as modified by the commitments and to declare it compatible with the internal market and with the functioning of the EEA Agreement, subject to full compliance with the conditions in section B of, and Schedule to the commitments annexed to the present decision and with the obligations contained in the other sections of the said commitments. This decision is adopted in application of Article 6(1)(b) in conjunction with Article 6(2) of the Merger Regulation and Article 57 of the EEA Agreement.

For the Commission

(signed)

Margrethe VESTAGER

Member of the Commission

COMP/M.8055 – COHERENT / ROFIN-SINAR
COMMITMENTS TO THE EUROPEAN COMMISSION

Pursuant to Article 6(2) of Council Regulation (EC) No 139/2004 as amended (the “Merger Regulation”), Coherent, Inc. (the “**Notifying Party**”/“**Coherent**”) hereby enters into the following Commitments (the “**Commitments**”) vis-à-vis the European Commission (the “**Commission**”) with a view to rendering the acquisition of Rofin-Sinar Technologies, Inc. (“**Rofin**”) by Coherent, Inc. (the “**Concentration**”) compatible with the internal market and the functioning of the EEA Agreement.

This text shall be interpreted in light of the Commission’s decision pursuant to Article 6(1)(b) of the Merger Regulation to declare the Concentration compatible with the internal market and the functioning of the EEA Agreement (the “**Decision**”), in the general framework of European Union law, in particular in light of the Merger Regulation, and by reference to the Commission Notice on remedies acceptable under Council Regulation (EC) No 139/2004 and under Commission Regulation (EC) No 802/2004 (the “**Remedies Notice**”).

Section A. Definitions

1. For the purpose of the Commitments, the following terms shall have the following meaning:

Affiliated Undertakings: undertakings controlled by the Parties and/or by the ultimate parents of the Parties, whereby the notion of control shall be interpreted pursuant to Article 3 of the Merger Regulation and in light of the Commission Consolidated Jurisdictional Notice under Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings (the “**Consolidated Jurisdictional Notice**”).

Assets: the assets that contribute to the current operation or are necessary to ensure the viability and competitiveness of the Divestment Business as indicated in **Section B**, paragraph 5 (a), (b), (c) and (d) and described more in detail in the Schedule.

Coherent: Coherent, Inc., a company incorporated under the laws of the State of Delaware with its seat in Santa Clara, California, having its business address at 5100 Patrick Henry Drive, Santa Clara CA 95054, California, United States of America.

Closing: the transfer of the legal title to the Divestment Business to the Purchaser.

Closing Period: the period of [...] from the approval of the Purchaser and the terms of sale by the Commission.

Confidential Information: any business secrets, know-how, commercial information, or any other information of a proprietary nature that is not in the public domain.

Conflict of Interest: any conflict of interest that impairs the Trustee's objectivity and independence in discharging its duties under the Commitments.

Divestment Business: the business as defined in **Section B** and in the Schedule which Coherent commits to divest.

Divestiture Trustee: one or more natural or legal person(s) who is/are approved by the Commission and appointed by Coherent, Inc. and who has/have received from Coherent the exclusive Trustee Mandate to sell the Divestment Business to a Purchaser at no minimum price.

Effective Date: the date of adoption of the Decision.

First Divestiture Period: the period of [...] from the Effective Date.

Hold Separate Manager: the person appointed by Coherent for the Divestment Business to manage the day-to-day business under the supervision of the Monitoring Trustee.

Key Personnel: all personnel necessary to maintain the viability and competitiveness of the Divestment Business, as listed in the Schedule, including the Hold Separate Manager.

Monitoring Trustee: one or more natural or legal person(s) who is/are approved by the Commission and appointed by Coherent and who has/have the duty to monitor Coherent's compliance with the conditions and obligations attached to the Decision.

Parties: the Notifying Party and the undertaking that is the target of the Concentration.

Personnel: all staff currently employed by the Divestment Business, including staff seconded to the Divestment Business, shared personnel as well as the additional personnel listed in the Schedule.

Purchaser: the entity approved by the Commission as acquirer of the Divestment Business in accordance with the criteria set out in **Section D**.

Purchaser Criteria: the criteria laid down in paragraph 16 of these Commitments that the Purchaser must fulfil in order to be approved by the Commission.

Rofin-Sinar: Rofin-Sinar Technologies Inc., a company incorporated under the laws of the State of Delaware with its headquarters at 40984 Concept Drive, Plymouth, Michigan 48170, United States of America.

Schedule: the schedule to these Commitments describing more in detail the Divestment Business.

Trustee(s): the Monitoring Trustee and/or the Divestiture Trustee as the case may be.

Trustee Divestiture Period: the period of [...] from the end of the First Divestiture Period.

Section B. The commitment to divest and the Divestment Business

Commitment to divest

2. In order to maintain effective competition, Coherent commits to divest, or procure the divestiture of the Divestment Business by the end of the Trustee Divestiture Period as a going concern to a purchaser and on terms of sale approved by the Commission in accordance with the procedure described in paragraph 17 of these Commitments. To carry out the divestiture, Coherent commits to find a purchaser and to enter into a final binding sale and purchase agreement for the sale of the Divestment Business within the First Divestiture Period. If Coherent has not entered into such an agreement at the end of the First Divestiture Period, Coherent shall grant the Divestiture Trustee an exclusive mandate to sell the Divestment Business in accordance with the procedure described in paragraph 29 in the Trustee Divestiture Period.
3. Coherent shall be deemed to have complied with this commitment if:
 - (a) by the end of the Trustee Divestiture Period, Coherent or the Divestiture Trustee has entered into a final binding sale and purchase agreement and the Commission approves the proposed purchaser and the terms of sale as being consistent with the Commitments in accordance with the procedure described in paragraph 17; and
 - (b) the Closing of the sale of the Divestment Business takes place within the Closing Period.
4. In order to maintain the structural effect of the Commitments, Coherent shall, for a period of 10 years after Closing, not acquire, whether directly or indirectly, the possibility of exercising influence (as defined in paragraph 43 of the Remedies Notice, footnote 3) over the whole or part of the Divestment Business, unless, following the submission of a reasoned request by Coherent

showing good cause and accompanied by a report from the Monitoring Trustee (as provided in paragraph 43 of these Commitments), the Commission finds that the structure of the market has changed to such an extent that the absence of influence over the Divestment Business is no longer necessary to render the proposed concentration compatible with the internal market.

Structure and definition of the Divestment Business

5. The Divestment Business is currently conducted by Rofin's subsidiary, Rofin-Sinar U.K. Ltd., Meadow Road, Bridgehead Business Park, Kingston Upon Hull HU13 0DG, United Kingdom. The legal and functional structure of the Divestment Business as operated to date is described in the Schedule. The Divestment Business, described in more detail in the Schedule, includes all assets and staff that contribute to the current operation or are necessary to ensure the viability and competitiveness of the Divestment Business, in particular:
 - (a) all tangible and intangible assets (including intellectual property rights);
 - (b) all licences, permits and authorisations issued by any governmental organisation for the benefit of the Divestment Business;
 - (c) all contracts, leases, commitments and customer orders of the Divestment Business; all customer, credit and other records of the Divestment Business; and
 - (d) the Personnel.
6. The Divestment Business is a largely stand-alone business. It will however include the benefit, for a transitional period after Closing and on terms and conditions equivalent to those at present afforded to the Divestment Business, of the current arrangements under which Rofin-Sinar or its Affiliated Undertakings supply products or services to or receive products or services from the Divestment Business, as detailed in the Schedule, unless otherwise agreed with the Purchaser. Strict firewall procedures will be adopted so as to ensure that any competitively sensitive information related to, or arising from such supply arrangements (for example, product roadmaps) will not be shared with, or passed on to, anyone other than the individuals involved in continuing to support the Divestment Business during the hold separate period and as may be required by law (e.g. to permit Coherent to comply with its statutory reporting requirements and legal obligations).

Section C. Related commitments

Preservation of viability, marketability and competitiveness

7. From the Effective Date until Closing, Coherent shall preserve or procure the preservation of the economic viability, marketability and competitiveness of the Divestment Business, in accordance with good business practice, and shall minimise as far as possible any risk of loss of competitive potential of the Divestment Business. In particular Coherent undertakes:
 - (a) not to carry out any action that might have a significant adverse impact on the value, management or competitiveness of the Divestment Business or that might alter the nature and scope of activity, or the industrial or commercial strategy or the investment policy of the Divestment Business;
 - (b) to make available, or procure to make available, sufficient resources for the development of the Divestment Business, on the basis and continuation of the existing business plans to the extent consistent with the terms herein;
 - (c) to take all reasonable steps, or procure that all reasonable steps are being taken, including appropriate incentive schemes (based on industry practice), to encourage all Key Personnel to remain with the Divestment Business, and not to solicit or move any Personnel to Coherent's remaining businesses. Where, nevertheless, individual members of the Key Personnel exceptionally leave the Divestment Business, Coherent shall provide

a reasoned proposal to replace the person or persons concerned to the Commission and the Monitoring Trustee. Coherent must be able to demonstrate to the Commission that the replacement is well suited to carry out the functions exercised by those individual members of the Key Personnel. The replacement shall take place under the supervision of the Monitoring Trustee, who shall report to the Commission.

Hold-separate obligations

8. Coherent commits, from the Effective Date until Closing, to keep the Divestment Business separate from the businesses it is retaining and to ensure that unless explicitly permitted under these Commitments:
 - (i) management and staff of the business retained by Coherent have no involvement in the Divestment Business (save as required to permit Coherent to comply with its statutory reporting requirements and legal obligations);
 - (ii) the Key Personnel of the Divestment Business have no involvement in any business retained by Coherent and do not report to any individual outside the Divestment Business, and
 - (iii) the Personnel named in **Annexes 552, 553 and 554** of the Schedule are ring-fenced from and have no involvement in the low power CO₂ part of the retained business and do not report to any individual in respect of the Divestment Business outside the Divestment Business.
9. Until Closing, Coherent shall assist the Monitoring Trustee in ensuring that the Divestment Business is managed as a distinct and saleable entity separate from the businesses retained by Coherent. Immediately after the adoption of the Decision, Coherent shall appoint a Hold Separate Manager. The Hold Separate Manager, who shall be part of the Key Personnel, shall manage the Divestment Business independently and in the best interest of the business with a view to ensuring its continued economic viability, marketability and competitiveness and its independence from the businesses retained by Coherent. The Hold Separate Manager shall closely cooperate with and report to the Monitoring Trustee and, if applicable, the Divestiture Trustee. Any replacement of the Hold Separate Manager shall be subject to the procedure laid down in paragraph 7(c) of these Commitments. The Commission may, after having heard Coherent, require Coherent to replace the Hold Separate Manager.
10. To ensure that the Divestment Business is held and managed as a separate entity the Monitoring Trustee shall exercise Coherent's rights as shareholder in the legal entity or entities that constitute the Divestment Business (except for its rights in respect of dividends that are due before Closing), with the aim of acting in the best interest of the business, which shall be determined on a stand-alone basis, as an independent financial investor, and with a view to fulfilling Coherent's obligations under the Commitments. Furthermore, the Monitoring Trustee shall have the power to replace members of the supervisory board or non-executive directors of the board of directors, who have been appointed on behalf of Coherent. Upon request of the Monitoring Trustee, Coherent shall resign as a member of the boards or shall cause such members of the boards to resign.

Ring-fencing

11. Coherent shall implement, or procure to implement, all necessary measures to ensure that it does not, after the Effective Date, obtain any Confidential Information relating to the Divestment Business and that any such Confidential Information obtained by Coherent before the Effective Date will be eliminated and not be used by Coherent. This includes measures vis-à-vis Coherent's appointees on the supervisory board and/or board of directors of the Divestment Business. In particular, the participation of the Divestment Business in any central information technology network shall be severed to the extent possible, without compromising the viability of the Divestment Business. Coherent may obtain or keep information relating to the Divestment Business which is reasonably necessary for the divestiture of the Divestment Business or the

disclosure of which to Coherent is required to enable it to comply with its statutory reporting requirements and legal obligations.

Non-solicitation clause

12. Coherent undertakes, subject to customary limitations, not to solicit, and to procure that Affiliated Undertakings do not solicit, the Key Personnel transferred with the Divestment Business for a period of [...] after Closing.

Due diligence

13. In order to enable potential purchasers to carry out a reasonable due diligence of the Divestment Business, the Parties shall, subject to customary confidentiality assurances and dependent on the stage of the divestiture process:
 - (a) provide to potential purchasers sufficient information as regards the Divestment Business;
 - (b) provide to potential purchasers sufficient information relating to the Personnel and allow them reasonable access to the Personnel.

Reporting

14. Coherent shall submit written reports in English on potential purchasers of the Divestment Business and developments in the negotiations with such potential purchasers to the Commission and the Monitoring Trustee no later than 10 days after the end of every month following the Effective Date (or otherwise at the Commission's request). Coherent shall submit a list of all potential purchasers having expressed interest in acquiring the Divestment Business to the Commission at each and every stage of the divestiture process, as well as a copy of all the offers made by potential purchasers within five days of their receipt.
15. Coherent shall inform the Commission and the Monitoring Trustee on the preparation of the data room documentation and the due diligence procedure and shall submit a copy of any information memorandum to the Commission and the Monitoring Trustee before sending the memorandum out to potential purchasers.

Section D. The Purchaser

16. In order to be approved by the Commission, the Purchaser must fulfil the following criteria:
 - (a) The Purchaser shall be independent of and unconnected to the Parties and their Affiliated Undertakings (this being assessed having regard to the situation following the divestiture).
 - (b) The Purchaser shall have the financial resources, proven expertise, and incentive [...] to develop the Divestment Business as a viable and active competitive force in competition with the Parties and other competitors. [and reference to sales and after-sales network];
 - (c) The acquisition of the Divestment Business by the Purchaser must neither be likely to create, in light of the information available to the Commission, prima facie competition concerns nor give rise to a risk that the implementation of the Commitments will be delayed. In particular, the Purchaser must reasonably be expected to obtain all necessary approvals from the relevant regulatory authorities for the acquisition of the Divestment Business.
17. The final binding sale and purchase agreement (as well as ancillary agreements) relating to the divestment of the Divestment Business shall be conditional on the Commission's approval. When Coherent has reached an agreement with a purchaser, it shall submit a fully documented and reasoned proposal, including a copy of the final agreement(s), within one week to the Commission and the Monitoring Trustee. Coherent must be able to demonstrate to the Commission that the purchaser fulfils the Purchaser Criteria and that the Divestment Business is being sold in a manner consistent with the Commission's Decision and the Commitments. For the

approval, the Commission shall verify that the purchaser fulfils the Purchaser Criteria and that the Divestment Business is being sold in a manner consistent with the Commitments including their objective to bring about a lasting structural change in the market. The Commission may approve the sale of the Divestment Business without one or more Assets or parts of the Personnel, or by substituting one or more Assets or parts of the Personnel with one or more different assets or different personnel, if this does not affect the viability and competitiveness of the Divestment Business after the sale, taking account of the proposed purchaser.

Section E. Trustee

I. Appointment procedure

18. Coherent shall appoint a Monitoring Trustee to carry out the functions specified in these Commitments for a Monitoring Trustee. Coherent commits not to close the Concentration before the appointment of a Monitoring Trustee.
19. If Coherent has not entered into a binding sale and purchase agreement regarding the Divestment Business one month before the end of the First Divestiture Period or if the Commission has rejected a purchaser proposed by Coherent at that time or thereafter, Coherent shall appoint a Divestiture Trustee. The appointment of the Divestiture Trustee shall take effect upon the commencement of the Trustee Divestiture Period.
20. The Trustee shall:
 - (a) at the time of appointment, be independent of the Parties and their Affiliated Undertakings;
 - (b) possess the necessary qualifications to carry out its mandate, for example have sufficient relevant experience as an investment banker or consultant or auditor; and
 - (c) neither have nor become exposed to a Conflict of Interest.
21. The Trustee shall be remunerated by the Notifying Parties in a way that does not impede the independent and effective fulfilment of its mandate. In particular, where the remuneration package of a Divestiture Trustee includes a success premium linked to the final sale value of the Divestment Business, such success premium may only be earned if the divestiture takes place within the Trustee Divestiture Period.

Proposal by Coherent

22. No later than two weeks after the Effective Date, Coherent shall submit the name or names of one or more natural or legal persons whom Coherent proposes to appoint as the Monitoring Trustee to the Commission for approval. No later than one month before the end of the First Divestiture Period or on request by the Commission, Coherent shall submit a list of one or more persons whom Coherent proposes to appoint as Divestiture Trustee to the Commission for approval. The proposal shall contain sufficient information for the Commission to verify that the person or persons proposed as Trustee fulfil the requirements set out in paragraph 20 and shall include:
 - (a) the full terms of the proposed mandate, which shall include all provisions necessary to enable the Trustee to fulfil its duties under these Commitments;
 - (b) the outline of a work plan which describes how the Trustee intends to carry out its assigned tasks;
 - (c) an indication whether the proposed Trustee is to act as both Monitoring Trustee and Divestiture Trustee or whether different trustees are proposed for the two functions.

Approval or rejection by the Commission

23. The Commission shall have the discretion to approve or reject the proposed Trustee(s) and to approve the proposed mandate subject to any modifications it deems necessary for the Trustee to fulfil its obligations. If only one name is approved, Coherent shall appoint or cause to be appointed the person or persons concerned as Trustee, in accordance with the mandate approved by the Commission. If more than one name is approved, Coherent shall be free to choose the Trustee to be appointed from among the names approved. The Trustee shall be appointed within one week of the Commission's approval, in accordance with the mandate approved by the Commission.

New proposal by Coherent

24. If all the proposed Trustees are rejected, Coherent shall submit the names of at least two more natural or legal persons within one week of being informed of the rejection, in accordance with paragraphs 18 and 23 of these Commitments.

Trustee nominated by the Commission

25. If all further proposed Trustees are rejected by the Commission, the Commission shall nominate a Trustee, whom Coherent shall appoint, or cause to be appointed, in accordance with a trustee mandate approved by the Commission.

II. Functions of the Trustee

26. The Trustee shall assume its specified duties and obligations in order to ensure compliance with the Commitments. The Commission may, on its own initiative or at the request of the Trustee or Coherent, give any orders or instructions to the Trustee in order to ensure compliance with the conditions and obligations attached to the Decision.

Duties and obligations of the Monitoring Trustee

27. The Monitoring Trustee shall:
- (i) propose in its first report to the Commission a detailed work plan describing how it intends to monitor compliance with the obligations and conditions attached to the Decision.
 - (ii) oversee, in close co-operation with the Hold Separate Manager, the on-going management of the Divestment Business with a view to ensuring its continued economic viability, marketability and competitiveness and monitor compliance by Coherent with the conditions and obligations attached to the Decision. To that end the Monitoring Trustee shall:
 - (a) monitor the preservation of the economic viability, marketability and competitiveness of the Divestment Business, and the keeping separate of the Divestment Business from the business retained by the Parties, in accordance with paragraphs 7 and 8 of these Commitments;
 - (b) supervise the management of the Divestment Business as a distinct and saleable entity, in accordance with paragraph 9 of these Commitments;
 - (c) with respect to Confidential Information:
 - determine all necessary measures to ensure that Coherent does not after the Effective Date obtain any Confidential Information relating to the Divestment Business, save as required to permit Coherent to comply with its statutory reporting requirements and legal obligations,
 - in particular strive for the severing of the Divestment Business' participation in a central information technology network to the extent possible, without compromising the viability of the Divestment Business,

- make sure that any Confidential Information relating to the Divestment Business obtained by Coherent before the Effective Date is eliminated and will not be used by Coherent, and
 - decide whether such information may be disclosed to or kept by Coherent as the disclosure is reasonably necessary to allow them to carry out the divestiture or as the disclosure is required by law;
- (d) monitor the splitting of assets and the allocation of Personnel between the Divestment Business and Coherent or Affiliated Undertakings;
- (iii) propose to Coherent such measures as the Monitoring Trustee considers necessary to ensure their compliance with the conditions and obligations attached to the Decision, in particular the maintenance of the full economic viability, marketability or competitiveness of the Divestment Business, the holding separate of the Divestment Business and the non-disclosure of competitively sensitive information;
- (iv) review and assess potential purchasers as well as the progress of the divestiture process and verify that, dependent on the stage of the divestiture process:
- (a) potential purchasers receive sufficient and correct information relating to the Divestment Business and the Personnel in particular by reviewing, if available, the data room documentation, the information memorandum and the due diligence process, and
 - (b) potential purchasers are granted reasonable access to the Personnel;
- (v) act as a contact point for any requests by third parties, in particular potential purchasers, in relation to the Commitments;
- (vi) provide to the Commission, sending Coherent a non-confidential copy at the same time, a written report within 15 days after the end of every month that shall cover the operation and management of the Divestment Business as well as the splitting of assets and the allocation of Personnel so that the Commission can assess whether the business is held in a manner consistent with the Commitments and the progress of the divestiture process as well as potential purchasers;
- (vii) promptly report in writing to the Commission, sending Coherent a non-confidential copy at the same time, if it concludes on reasonable grounds that Coherent or Rofin is failing to comply with these Commitments;
- (viii) within one week after receipt of the documented proposal referred to in paragraph 17 of these Commitments, submit to the Commission, sending Coherent a non-confidential copy at the same time, a reasoned opinion as to the suitability and independence of the proposed purchaser and the viability of the Divestment Business after the Sale and as to whether the Divestment Business is sold in a manner consistent with the conditions and obligations attached to the Decision, in particular, if relevant, whether the sale of the Divestment Business without one or more Assets or not all of the Personnel affects the viability of the Divestment Business after the sale, taking account of the proposed purchaser;
- (ix) assume the other functions assigned to the Monitoring Trustee under the conditions and obligations attached to the Decision.
28. If the Monitoring and Divestiture Trustee are not the same [legal or natural] persons, the Monitoring Trustee and the Divestiture Trustee shall cooperate closely with each other during and for the purpose of the preparation of the Trustee Divestiture Period in order to facilitate each other's tasks.

Duties and obligations of the Divestiture Trustee

29. Within the Trustee Divestiture Period, the Divestiture Trustee shall sell at no minimum price the Divestment Business to a purchaser, provided that the Commission has approved both the purchaser and the final binding sale and purchase agreement (and ancillary agreements) as in line with the Commission's Decision and the Commitments in accordance with paragraphs 16 and 17 of these Commitments. The Divestiture Trustee shall include in the sale and purchase agreement (as well as in any ancillary agreements) such terms and conditions as it considers appropriate for an expedient sale in the Trustee Divestiture Period. In particular, the Divestiture Trustee may include in the sale and purchase agreement such customary representations and warranties and indemnities as are reasonably required to effect the sale. The Divestiture Trustee shall protect the legitimate financial interests of Coherent, subject to Coherent's unconditional obligation to divest at no minimum price in the Trustee Divestiture Period.
30. In the Trustee Divestiture Period (or otherwise at the Commission's request), the Divestiture Trustee shall provide the Commission with a comprehensive monthly report written in English on the progress of the divestiture process. Such reports shall be submitted within 15 days after the end of every month with a simultaneous copy to the Monitoring Trustee and a non-confidential copy to Coherent.

III. Duties and obligations of the Parties

31. Coherent shall provide and shall cause their advisors to provide the Trustee with all such co-operation, assistance and information as the Trustee may reasonably require to perform its tasks. The Trustee shall have full and complete access to any of Rofin's or the Divestment Business' books, records, documents, management or other personnel, facilities, sites and technical information necessary for fulfilling its duties under the Commitments and Rofin and the Divestment Business shall provide the Trustee upon request with copies of any document. Coherent, Rofin, and the Divestment Business, as the case may be, shall make available to the Trustee one or more offices on their premises and shall be available for meetings in order to provide the Trustee with all information necessary for the performance of its tasks.
32. Coherent shall provide the Monitoring Trustee with all managerial and administrative support that it may reasonably request on behalf of the management of the Divestment Business. This shall include all administrative support functions relating to the Divestment Business which are currently carried out at headquarters level. Coherent shall provide and shall cause its advisors to provide the Monitoring Trustee, on request, with the information submitted to potential purchasers, in particular give the Monitoring Trustee access to the data room documentation and all other information granted to potential purchasers in the due diligence procedure. Coherent shall inform the Monitoring Trustee as to possible purchasers, submit lists of potential purchasers at each stage of the selection process, including the offers made by potential purchasers at those stages, and keep the Monitoring Trustee informed of all developments in the divestiture process.
33. Coherent shall grant or procure Rofin SL to grant comprehensive powers of attorney, duly executed, to the Divestiture Trustee to effect the sale (including ancillary agreements), the Closing and all actions and declarations which the Divestiture Trustee considers necessary or appropriate to achieve the sale and the Closing, including the appointment of advisors to assist with the sale process. Upon request of the Divestiture Trustee, Coherent shall cause the documents required for effecting the sale and the Closing to be duly executed.
34. Coherent shall indemnify the Trustee and its employees and agents (each an "Indemnified Party") and hold each Indemnified Party harmless against, and hereby agrees that an Indemnified Party shall have no liability to Coherent for, any liabilities arising out of the performance of the Trustee's duties under the Commitments, except to the extent that such liabilities result from the wilful default, recklessness, gross negligence or bad faith of the Trustee, its employees, agents or advisors.

35. At the expense of Coherent, the Trustee may appoint advisors (in particular for corporate finance or legal advice), subject to Coherent's approval (this approval not to be unreasonably withheld or delayed) if the Trustee considers the appointment of such advisors necessary or appropriate for the performance of its duties and obligations under the Mandate, provided that any fees and other expenses incurred by the Trustee are reasonable. Should Coherent refuse to approve the advisors proposed by the Trustee the Commission may approve the appointment of such advisors instead, after having heard Coherent. Only the Trustee shall be entitled to issue instructions to the advisors. Paragraph 34 of these Commitments shall apply mutatis mutandis. In the Trustee Divestiture Period, the Divestiture Trustee may use advisors who served Coherent during the Divestiture Period if the Divestiture Trustee considers this in the best interest of an expedient sale.
36. Coherent agrees that the Commission may share Confidential Information proprietary to them with the Trustee. The Trustee shall not disclose such information and the principles contained in Article 17 (1) and (2) of the Merger Regulation apply mutatis mutandis.
37. Coherent agrees that the contact details of the Monitoring Trustee are published on the website of the Commission's Directorate-General for Competition and they shall inform interested third parties, in particular any potential purchasers, of the identity and the tasks of the Monitoring Trustee.
38. For a period of 10 years from the Effective Date the Commission may request all information from Coherent that is reasonably necessary to monitor the effective implementation of these Commitments.

IV. Replacement, discharge and reappointment of the Trustee

39. If the Trustee ceases to perform its functions under the Commitments or for any other good cause, including the exposure of the Trustee to a Conflict of Interest:
 - (a) the Commission may, after hearing the Trustee and Coherent, require Coherent to replace the Trustee; or
 - (b) Coherent may, with the prior approval of the Commission, replace the Trustee.
40. If the Trustee is removed according to paragraph 39 of these Commitments, the Trustee may be required to continue in its function until a new Trustee is in place to whom the Trustee has effected a full hand over of all relevant information. The new Trustee shall be appointed in accordance with the procedure referred to in paragraphs 18 to 25 of these Commitments.
41. Unless removed according to paragraph 39 of these Commitments, the Trustee shall cease to act as Trustee only after the Commission has discharged it from its duties after all the Commitments with which the Trustee has been entrusted have been implemented. However, the Commission may at any time require the reappointment of the Monitoring Trustee if it subsequently appears that the relevant remedies might not have been fully and properly implemented.

Section F. The review clause

42. The Commission may extend the time periods foreseen in the Commitments in response to a request from Coherent or, in appropriate cases, on its own initiative. Where Coherent requests an extension of a time period, it shall submit a reasoned request to the Commission no later than one month before the expiry of that period, showing good cause. This request shall be accompanied by a report from the Monitoring Trustee, who shall, at the same time send a non-confidential copy of the report to the Notifying Party. Only in exceptional circumstances shall Coherent be entitled to request an extension within the last month of any period.
43. The Commission may further, in response to a reasoned request from Coherent showing good cause waive, modify or substitute, in exceptional circumstances, one or more of the undertakings

in these Commitments. This request shall be accompanied by a report from the Monitoring Trustee, who shall, at the same time send a non-confidential copy of the report to Coherent. The request shall not have the effect of suspending the application of the undertaking and, in particular, of suspending the expiry of any time period in which the undertaking has to be complied with.

Section G. Entry into force

44. The Commitments shall take effect upon the date of adoption of the Decision.

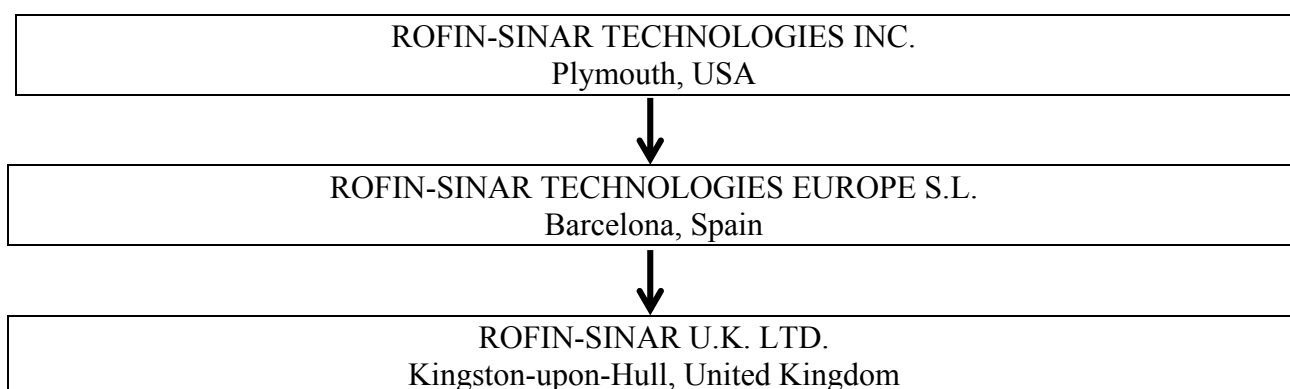
[Signed on behalf of Coherent, Inc.]

October [21], 2016

SCHEDULE

1. The Divestment Business as operated to date has the following legal and functional structure:

- (1) Rofin-Sinar U.K. Limited (“RSUK”) is a 100% subsidiary of Rofin-Sinar Technologies Europe SL. Its ultimate parent company is Rofin-Sinar Technologies Inc. (“RSTI”). RSTI is headquartered in Plymouth (United States) and in Hamburg (Germany). RSUK operates as an autonomous entity within the Rofin group. An organisational chart for the Rofin-Sinar group is attached at **Annex 511**. An organisational chart for the Divestment Business is attached as **Annex 571**.
- (2) The structural links between RSTI and RSUK are summarized in this graphic:



- (3) RSUK has its registered office at the following address:

Rofin-Sinar U.K. Ltd.,
Meadow Road,
Bridgehead Business Park,
Kingston Upon Hull,
HU13 0DG

Registered in England: 3477444

Tel.: +44 1482 650088

Fax: +44 1482 650022
- (4) The business was established in early 1998 to develop and extend RSTI’s CO₂ laser product range to include sealed CO₂ lasers below 1000W (“low power CO₂ lasers”). Prior to this, RSTI only sold high power CO₂ lasers of 1000W and above manufactured in its Hamburg (Germany) facility.
- (5) Today, RSUK manufactures (i) a wide range of sealed CO₂ laser sources at power levels from 100W to 650W for industrial processing and marking applications, such as its SR, SC, and OEM series, and (ii) its low power CO₂ laser system products called Multiscan VS. Coherent is proposing to sell both of these businesses (i.e. the sources and systems businesses) in their entirety.
- (6) RSUK’s lasers are employed in a variety of industries including automotive, aerospace, packing, electronics and in a number of applications involving cutting, drilling, welding, marking of plastics, metal, fabrics and ceramics. RSUK is the only company/site within the Rofin group

which is active in the production of low power CO₂ lasers. RSUK's low power CO₂ laser products are sold and distributed through Rofin's worldwide sales and service organization and by third-party distributors.

- (7) As at 3 October 2016, RSUK employs [...] people, has a turnover of approximately GBP 26 million (FY 2016) and exports [>90]% of its products to over 50 countries worldwide.

2. In accordance with paragraph 5 of these Commitments, the Divestment Business includes, but is not limited to:

(a) main tangible assets:

- (8) The Divestment Business is comprised of the entire Bridgehead Business Park site, consisting of a new, purpose built 80,000 sq. ft. factory near the Humber Bridge in Hull, which was opened in February 2016:

RSUK facility



- (9) The Divestment Business also includes:
- All plant and machinery belonging to RSUK, including certain assets located in [...] (Germany) and [...] (China); and
 - All fixtures and fittings belonging to RSUK.
- (10) A detailed list of the tangible assets used and owned by RSUK is provided at **Annex 551**.

(b) main intangible assets:

- (11) The patents listed on **Annex 551** are registered in the name of RSUK on behalf of the Rofin group. In this Form,
- References to “gas laser device patents” are to U.S. patent US8116348 filed on October 21, 2008 and to the other patents and patent applications referred to in **Annex 551** in respect of the same invention,
 - References to “mode selection technique for a laser patents” are to European patent EP2362502 filed on January 14, 2011 and to the other patents and patent applications referred to in **Annex 551** in respect of the same invention,

- References to “integrated pre-power amplifier patents” are to UK patent GB2505315 filed on August 7, 2013 and to the other patents and patent applications referred to in **Annex 551** in respect of the same invention, and
 - [Reference to patents used exclusively for non-low power CO₂ lasers that is to be transferred to Coherent/Rofin].
- (12) Title to the gas laser device patents and to the mode selection technique for a laser patents shall be retained by RSUK, subject in each case to the grant to Coherent from RSUK of [a license in respect of high power CO₂ laser sources]. Any license will include a license to any additional tangible or intangible assets such as know-how, models or test data.
- (13) Title to the integrated pre-power amplifier patents (which today are used predominantly for [non-low power CO₂] but which are being used by RSUK for the development of low power CO₂ laser sources) shall be transferred from RSUK to a Coherent/Rofin company, subject to the grant of [licenses to RSUK]. Any license will include a license to any additional tangible or intangible assets such as know-how, models or test data.
- (14) Title to [the fourth family of] patents (used exclusively for [non-low power CO₂] lasers) shall be transferred from RSUK to a Coherent/Rofin company. These patents are therefore “excluded assets”, as the term is used in Part 3 of the Schedule to the Commitments.
- (15) Pending the sale of the Divestment Business, and at the option of the Purchaser, for up to [...] after Closing, the Divestment Business shall have a royalty-free license to use the brand “Rofin-Sinar Hull”, and any pre-branded stock and spare parts with the current marks used in association with the sale of the low power CO₂ laser sources and systems marketed by RSUK. This license is granted on the condition that RSUK and/or the Purchaser shall indemnify Coherent and/or Rofin from any and all damages caused to the brand “ROFIN”, “Rofin-Sinar” and related brands and marks.

(c) the following main licences, permits and authorisations:

- (16) RSUK has all governmental licences, permits and authorisations required to operate the facilities and business located at Bridgehead Business Park. Coherent does not anticipate any difficulties in transferring these governmental licences, permits and authorisations.
- (17) RSUK is accredited to the ISO9001-2008 quality standard and uses the latest lean manufacturing techniques, to ensure a flexible world-class manufacturing environment that is responsive to customer needs and requirements.

(d) the following main contracts, agreements, leases, commitments and understandings:

- (18) To the extent applicable, and where permitted under the terms of the existing contracts and agreements, Coherent will transfer, assign, or grant to the Purchaser all such contracts and agreements.

(e) the following customer, credit and other records:

- (19) All relevant data, books, records, and other documents exclusively related to or necessary for the operation of RSUK including existing customer records and supplier records.
- (20) A non-exhaustive list of RSUK customers of low power CO₂ laser sources, showing total turnover generated by each (in EUR and as a percentage of total turnover), in the financial year 2015 is attached as **Annex 581**.

(21) A non-exhaustive list of RSUK Multiscan customers, showing total turnover generated by each (in EUR and as a percentage of total turnover), in the financial year 2015 is attached as **Annex 582**.

(f) the following Personnel:

(22) A list of all personnel working for RSUK at Hull (together with a short description of their functions, up-to-date as at September 2016) is attached as Annex 571. The names and functions of other RSTI personnel who contribute to the sales effort of RSUK are listed in **Annexes 552, 553 and 554**.

(g) the following Key Personnel:

(23) The names of Key Personnel are listed at **Annex 572**.

(h) the arrangements for the supply with the following products or services by Coherent or Affiliated Undertakings for transitional periods of up to five and ten years after Closing:

Supply arrangements to RSUK

(24) Given the autonomous nature of RSUK, the divestiture should be accomplished without difficulty, with few (if any) transitional arrangements being required. These agreements are necessary in order to avoid supply disruptions to customers of both RSUK and other Rofin subsidiaries.

(25) [A Rofin-Sinar subsidiary currently supplies certain components] to RSUK. Coherent shall continue to meet RSUK's requirements on arm's length terms as is currently the case under the existing arrangement between RSUK and [...] during the hold separate period and for [...] years after the Closing. At the request of the Divestment Business, Coherent shall grant a [...] license to the Divestment Business of any know-how or other intellectual property used by Coherent/[...] which is needed to enable RSUK to develop an alternative source of supply [of these components].

(26) [Another Rofin-Sinar subsidiary currently supplies certain components and services to] RSUK [...]. Coherent shall continue to [meet RSUK's requirements] on arm's length terms as is currently the case under the existing arrangement between RSUK and [...] during the hold separate period and for [...] years after the Closing. At the request of the Divestment Business, Coherent shall grant a [...] license to the Divestment Business of any know-how or other intellectual property used by Coherent/[...] which is needed to enable RSUK to develop an alternative source of supply [of these components and services].

(27) The supply agreements referred to in paragraphs (25) and (26) may be terminated:

- at any time, by mutual agreement, or
- at the request of the Divestment Business, on [...] notice, given no earlier than [...] years after the Closing.

(28) [...]. Until the Closing, and, at the option of the Purchaser, for a period of up to [...] months thereafter, arrangements shall be made for RSUK to be provided with marketing support from [...] on a mutually agreed upon basis with the hold separate manager, the Monitoring Trustee and members of the Coherent clean team.

(29) The Divestment Business has its own IT systems (with the exception of a VPN link between RSUK and [a Rofin-Sinar facility in] China which is used for [...]). Arrangements will be made to ensure that a suitable link is maintained with [the facility in China] until the Closing, and, at the option of the Purchaser, for a period of up to [...] months thereafter.

- (30) Certain sales and service support will also be required by RSUK during the hold separate period and for a transitional period after the Closing.
- (31) Three groups of sales and service support personnel shared between RSUK and the Rofin group have been identified.
- (32) [... including reference to **Annex 552**]:
- [...]
 - [...].
- (33) [... including reference to **Annex 553**].
- (34) [... including reference to **Annex 554**].

Supply arrangements to Coherent-Rofin group

- (35) RSUK is also a supplier of [certain components to another Rofin-Sinar subsidiary]. These are integrated into other Rofin systems [...] and these systems are then sold to partners or customers. Arrangements shall be made for this supply agreement to continue on arm's length terms as is the case under the existing arrangement [...] during the hold separate period and for [...] years after the Closing.
- (36) The supply agreement referred to in paragraph (35) may be terminated:
- at any time, by mutual agreement, or
 - at the request of the Divestment Business, on [...] notice, given no earlier than [...] years after the Closing.

3. The Divestment Business shall not include:

- (37) One R&D project [...] shall be excluded from the scope of the Divestment Business.
- (38) Title to two sets of patents shall be transferred by RSUK to a Coherent/Rofin entity, as described in detail at paragraphs (13) and (14) above.

4. If there is any asset or personnel which is not covered by paragraph 2 of this Schedule but which is both used (exclusively or not) in the Divestment Business and necessary for the continued viability and competitiveness of the Divestment Business, that asset or adequate substitute will be offered to potential purchasers.

- (39) Blank.

ANNEXES TO THE SCHEDULE

Annex 511 – Organisational chart of RSTI

[...]

Annex 551 – Patents registered in the name of the Divestment Business

[...]

Annexes 552, 553, 554 – Shared personnel

[...]

Annex 571 – Organisational chart of the Divestment Business

[...]

Annex 572 – List of Key Personnel

[...]

Annex 581 – Customer list for low power CO₂ laser products

[...]

Annex 582 – Customer list for Multiscan products

[...]