

***Case No IV/M.1493 -
UNITED
TECHNOLOGIES /
SUNDSTRAND***

Only the English text is available and authentic.

**REGULATION (EEC) No 4064/89
MERGER PROCEDURE**

Article 6(1)(b) NON-OPPOSITION
Date: 25/05/1999

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COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 25.05.1999

In the published version of this decision, some information has been omitted pursuant to Article 17(2) of Council Regulation (EEC) No 4064/89 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 Where possible the information omitted has been replaced by ranges of figures or a general description.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
ARTICLE 6(1)(b) DECISION

To the notifying party.

Dear Sirs,

Subject: Case No IV/M.1493-United Technologies / Sundstrand

Notification of 19 April 1999 pursuant to Article 4 of Council Regulation No 4064/89

1. On 19 April 1999, the Commission received a notification of a proposed concentration pursuant to Article 4 of Council Regulation (EEC) N° 4064/89 by which the undertaking United Technologies Corporation acquires within the meaning of Article 3(1)(b) of the Council Regulation sole control over Sundstrand Corporation.
2. After examination of the notification, the Commission has concluded that the notified operation falls within the scope of Council Regulation (EEC) N 4064/89 and does not raise serious doubts as to its compatibility with the common market and with the EEA Agreement.

I. THE PARTIES

3. United Technologies Corporation ("UTC") is a global and diversified US based industrial equipment company . The UTC group includes Otis (elevators, escalators walkways and shuttle systems); Pratt & Whitney (commercial and military jet engines, rocket engines and space propulsion systems); UTC Flight Systems (flight and fleet control systems and propellers for commercial aircraft and commercial and military helicopters); UT Automotive (car components and systems); Carrier (HVAC equipment for commercial, industrial and residential buildings); and turbo Power and Marine (industrial gas turbines).
4. Sundstrand Corporation ("SC") is a US based company supplying aerospace and industrial products such as aerospace electric, mechanic and power systems; pumps; enclosed gear drives; shaft couplings; alloy steel castings; compressors; pneumatic tools; dryers and filters.

II. THE OPERATION

5. Although the parties refer to the present operation as a merger it has to be seen as an acquisition of sole control as it will result in the acquisition by UTC of all the outstanding shares of Sundstrand which will be finally integrated into a newly formed company, HSSail Inc., belonging to UTC.

III. CONCENTRATION

6. The acquisition by UTC of sole control over Sundstrand constitutes a concentration within the meaning of Article 3(1)(b) of the Merger Regulation.

IV. COMMUNITY DIMENSION

7. The undertakings concerned have a combined aggregate world-wide turnover of more than EUR 5 billion¹ (€23 billion UTC and € 1'7 billions SC). Each of the undertakings have a Community-wide turnover in excess of EUR 250 million (€ [...] UTC and € [...] SC), but they do not achieve more than two-thirds of their aggregate Community-wide turnover within one and the same Member State. The notified operation therefore has a Community dimension.

V. COMPETITIVE ASSESSMENT

A. The Relevant Product Market

Horizontal Overlaps

8. According to the parties the areas in which overlaps arise concern certain industrial and aerospace products namely : compressors for industrial applications; aircraft flight actuation systems; aircraft auxiliary power units; starters for aircraft; environmental control systems for aircraft and gas turbine engines.
9. Compressors for industrial applications. Compressors are designed to compress or squeeze a gas into a more pressurised state than that in which it exists under normal atmospheric conditions. Different kinds can be distinguished based on technology, end-use applications and capacity. The parties produce three different types of products, namely (i) air compressors; (ii) heating, ventilation and air conditioning (HVAC) and refrigeration and (iii) gas compressors. According to the parties SC's sales of compressors are almost entirely of air compressors while UTC does not manufacture air compressors but focuses mainly on compressors for HVAC and refrigeration equipment as well as rotary screw compressors for gas applications in the petrochemical industry.
10. The parties submit that HVAC and refrigerator compressors and gas compressors constitute a single product market as technology is very similar and there is a high degree of supply side substitutability. However in this case the product market definition can be

¹ Turnover calculated in accordance with Article 5(1) of the Merger Regulation and the Commission Notice on the calculation of turnover (OJ C66, 2.3.1998, p25). To the extent that figures include turnover for the period before 1.1.1999, they are calculated on the basis of average ECU exchange rates and translated into EUR on a one-for-one basis.

left open as there is no competition problem arising from the operation in any the products above mentioned either treated separately or as part of the same product market.

11. Aircraft Actuation Systems. Flight control actuators are systems which move parts within or on an aircraft. They encompass (i) primary flight control systems, which are essentially components needed to maintain aircraft control when it is in the air and (ii) secondary flight control systems (namely: flap and slat controls and stabiliser controls) which are used to trim the primary flight control surfaces and help to make take-off and landing possible. Secondary flight control systems (“secondary actuators”) consist of a power unit located in the fuselage of the aircraft, ball screws or rotary devices located in the wings and connected to a transmission system that turns rotary motion into linear motion, a brake system and a controlling device.
12. The parties are only active in the area of secondary flight actuators both for commercial and military applications. In the civil industry Sundstrand produces actuators mainly for medium to large commercial aircraft (i.e. Boeing 757; Airbus and Boeing 747) while UTC, through his Italian subsidiary Microtecnica, focuses on flight actuators for small business jets. Notwithstanding the different technical characteristics of actuators when used for different types of commercial aircrafts the parties submit, and the market investigation seems to confirm, that they constitute a single product market. It has also been confirmed that in principle flight actuators are sold as a complete system and only exceptionally as subcomponents for replacement products.
13. The parties are also active in the supply of secondary flight actuators for the military aircraft. The special characteristics of some recent developments in military aircraft (non-manned applications) result in different technological actuators which perform more sophisticated functions in the aircraft. On the other hand in most manned applications there seem to be no major substantial differences from the supply side between civil and military flight actuators. Notwithstanding this the question whether civil and military applications constitute a different product markets can be left open in this case as the operation does not create any competition problem in either event.
14. Auxiliary Power Units (APUs). APUs are small gas turbine engines that sit in a plane’s tail section and are used to provide electrical power and airflow to the aircraft cabin and to supply air to pneumatic starters while the plane is on the ground (they do not provide propulsion). It is possible to identify three types of APUs depending on the shaft power (“shp”): (i) APUs with less than 550 shp (ii) APUs with power between 550 and 1100 shp and (iii) APUs with over 1100 shp.
15. Sundstrand only supplies APUs under 550 shp while UTC, through Pratt & Whitney, manufactures one model of over 1100 shp. The parties submit that the three different categories of APU’s constitute different product markets given their different technologies and final applications. However the product market definition can be left open in this case as the concentration does not create or reinforce any dominant position in this market neither considered it as a whole product market nor as different segments.
16. As to military applications only Sundstrand is active in this area. UTC has only one product within the over 1100 shp category which is made for only one individual military aircraft in the US. It is appropriate to say that there is no overlap in the military industry and accordingly the product market definition can be left open as no significant overlap arises in this case.

17. Starters for Aircraft Engines. Aircraft engine starters are used to translate energy from air, fuel, or other sources to start the engine by causing rotation. They are used in both civil and military applications. According to the parties the technology used for military applications is far more sophisticated than the one for civil aircraft and accordingly two different product markets can be differentiated. UTC's subsidiary Hamilton Standard makes starters only for commercial applications using the air turbine system, which use a burst of air to begin the start process. Conversely Sundstrand is only active in the military industry producing only a jet fuel starter, which utilises jet fuel to initiate the starting process. The parties submit that there is no horizontal overlap in this product regardless of the definition of the product market as there are different technologies and end uses. For the present case there is no need to further analyse this market as no competition problem arises from the operation with regard to starters.
18. Environmental Control Systems for Aircraft ("ECS"). ECS include many types of products which perform different functions in the aircraft, namely (i) air conditioning systems (provide passengers with heated/cooled conditioned air); (ii) bleed air systems (control the distribution of the air taken from the engine and provides it to the air conditioning, anti-ice and engine starting systems); (iii) cabin pressure control systems (maintain comfortable pressure in the cabin as the aircraft changes altitude) and (iv) anti-ice systems (use hot air taken from the engine and delivers it to the wings and engine inlet surfaces to prevent ice from forming).
19. UTC is active in the four groups of products identified above both in the civil and the military industry. Sundstrand only makes one cooling system, a refrigeration system, used in a particular US military aircraft to cool electronic equipment. Sundstrand's cooling system uses different technology (vapour cycle cooling) from UTC's conditioning products (air cycling cooling systems). No significant overlap in terms of product overlaps seems to arise in this sector and accordingly the market definition can be left open in the present case.
20. Gas Turbine Engines. UTC produces propulsion engines (turbofan and turboshaft types) for manned commercial and military aircraft with different power depending on the size and type of the aircraft, namely turbofans above 2000 pounds of thrust and turboshaft engines over 500 horsepower. On the other hand Sundstrand is not active in any of these products. For the time being the only products Sundstrand is developing are not primary propulsion engines but microturbines for munitions, decoys and unmanned vehicle applications. Sundstrand products are at a development stage and have no sales in the market. Therefore the parties submit that there is no overlap in terms of product market overlap. For these reasons this product will not be treated further.

Vertical Relationships

21. The parties submit that their activities might have vertical relationships limited to three products, namely (i) ball screws for flight actuation systems; (ii) gearboxes and pumps for gas turbine engines and (iii) fans.
22. Ball-screws for flight actuation systems. UTC through Ratier Figeac (RF), a Hamilton Standard subsidiary, manufactures ball-screws which are sold to major flight actuation systems suppliers such as [...] as well as Sundstrand and RF itself. However RF's sales to Sundstrand and their total market shares are not big enough to produce a negative effect on supplies to clients other than Sundstrand.

23. In relation with gearboxes and pumps for gas turbine engines, Sundstrand is a supplier of both products to main gas turbine manufacturers world-wide including UTC.
- (i) *Gearboxes*. UTC purchases engine gearboxes from third parties. Their main suppliers are manufacturers like Fiat, Aero Gear, Arrow Gear and Gear Systems. Sundstrand is a minor supplier and UTC has a small in-house production through Pratt & Whitney.
- (ii) *Fuel and Lube /Scavenge Pumps*. Pumps perform various function in particular pumping fuel, oil or lubricants : *Fuel pumps* receive the fuel usually from tanks located in the aircraft wings, compress the fuel and deliver it to injectors to send to the combustors. *Lube and Scavenge pumps* are oil and lubricant pumps, smaller than fuel pumps. UTC suppliers are Sundstrand and [...] together with [...] for lube pumps.
24. Fans . Although fans could be used as part of ECS cooling systems the normal practice however is that they are not supplied to ECS producers but sold separately to airframe manufacturers which install them in a number of different places in the aircraft. For this reason fans cannot be regarded as an integral component of ECS cooling systems as described above. Sundstrand supplies fans to ECS manufacturers but at present it does not supply to UTC. For the purpose of the present case, this product does not constitute an upstream product market for ECS systems and does not create a vertical link with the parties and accordingly it will not be treated further.

B The Relevant Geographic Market

25. As far as industrial compressors is concerned the normal market practice tends to show that these markets are at least European-wide.
26. As regards aerospace products the parties submit that these markets are at least European-wide, if not wider, except for military applications . For civil or commercial applications markets are open world-wide and there are no significant barriers to trade. Furthermore major suppliers operate world-wide and their customers purchase on a global basis.
27. As to aerospace products for military applications, the parties agree to previous analysis made by the Commission ² concluding that in principle the geographic market for these products should be considered as global, however in certain situations the geographic scope of these markets is narrower: when a supplier is established in a particular country the market may need to be treated as national in scope. Even if products result from a joint programme between several countries there is a tendency to purchase from suppliers established in those countries. The investigation in this case tends to confirm this view.

² See Commission's decisions in cases IV/M.527-Thomson/Deutsche Aerospace; IV/M.368-Snecma/TI; IV/M. 1159-Snecma/Messier Dowty; IV/M.1198-British Aerospace Plc/Saab AB; IV/M.1185-Alcatel/Thomson-CSF-SCS.

C Market Assessment

28. Compressors for industrial applications. There is a minimum overlap regarding HVAC and refrigeration compressors on the one hand and gas compressors on the other. The parties' global market shares in any of these markets are less than 1 % either treated separately or as parts of the same product market. There is no overlap at the EEA level as only UTC is present in this market. No overlap arises either for air compressors (only Sundstrand is present with market shares of less than [between 5-10%] world-wide and less than [between 0-5%] in Europe).

Aerospace Products

29. Secondary Flight Actuation Systems. According to the notifying party the parties' combined share of sales world-wide is [less than 15%]. In the EEA the combined share is less than [between 0-5%]. Main competitors are Lucas with [between 20-30%] market share world-wide and Liebherr with [between 15-25%], (both having a much more significant presence in Europe), followed by Curtis-Wright, Moog and Dowty with global market shares of [between 15-25%], [between 10-20%] and [less than 10%] respectively. There are also other suppliers with less than 4% global share.
30. As regards flight actuation systems for military applications the notifying party submits that only UTC is present at the EEA level supplying secondary actuators, through its Italian subsidiary Microtecnica, in two European countries. According to the parties' estimates their combined global market share is of [less than 15%] ([...] Sundstrand and [...] UTC through Microtecnica). Accordingly the combined market share does not give rise to concern.
31. Auxiliary Power Units. According to the parties the three types of APUs mentioned above constitute different product markets. Sundstrand supplies APUs under 550 shp with a global market share of sales between [less than 15%]. UTC only manufactures and sells a model within the category of over 1100 shp as specified above, where it is market leader with a [between 55-65%] global share of sales. In any event if the product market had to be considered as a single one for the different types of APU's, the parties' combined global market share would be of [less than 15%] ([...] for Sundstrand and [...] for UTC).
32. As to military sales no overlap arises from this operation. Indeed only Sundstrand is active in this product market as UTC only supplies the military industry with a sophisticated version of its [...] model for one particular aircraft in the US.
33. Starters for Aircraft Engines. As seen above only UTC makes starters for commercial applications (large aircraft) with a market share world-wide of [between 10-20%]. Conversely only Sundstrand supplies the military industry with a particular jet fuel starter outside the EEA. Main competitors are Allied Signal and Parker Hannifin.
34. Environmental Control Systems for Aircraft ("ECS"). Only UTC is active in this market for civil and military manned applications. Sundstrand produces a particular cooling system for the military industry based on a different technology and with a *de minimis* market share (less than [...]). The notifying party has provided figures of sales and estimates of market shares on a global basis including both civil and military applications for the different types of products above identified, namely air conditioning, [between 15-25%]; bleed air systems [between 10-20%]; cabin pressure control systems [between 40-50%] and anti-ice systems [between 10-20%]. If one considered ECS as a single product

market, UTC's global market share would be of [between 20-25%] world-wide and [less than 15%] in Europe.

Vertical Links

35. Ball-screws for flight actuation systems. UTC estimates that its RF subsidiary's shares of ball screws for flight actuators are less than 10% world-wide and 20% in the EEA. RF's sales to Sundstrand represent [less than 10%] of their total flight actuation systems sales. Other ball-screw manufacturers are Umbra in Italy, and Beaver, Saginaw and Warner in the US. Therefore it appears that even if UTC were to discriminate in favour of its own companies within the UTC group, this would not constitute a competition problem .
36. Gearboxes and Pumps for gas turbine engines. As for gearboxes Sundstrand's global market share is negligible (less than 1%). UTC's main supplier is [...] and there are a large number of suppliers world-wide including SNECMA, Aero Gear, Arrow Gear, Gear Systems Inc. and Purdy Corporation. Therefore the operation is not likely to modify the existing structure of the supply market and will not have an appreciable effect on the pre-existing relationships between competitors.
37. As far as pumps are concerned Sundstrand holds global market shares of [between 10-20%] both for fuel pumps and for lube and scavenge pumps either taken separately or if considered together as part of the same product market. UTC present suppliers are Sundstrand, [...] and [...]. The parties submit that there are a large number of suppliers such as Argotech, Chandler Evans, Lucas and Vickers for fuel pumps; and Parker/Nichols, Crane/Lear, Techspace Aero, Fiat and Argotech for lube and scavenge pumps. The notifying party submits that it will not be able to satisfy internally all its pump requirements and will have to continue purchasing from their present suppliers. Therefore in view of the limited market shares of Sundstrand and the large number of suppliers left on the market there are not sufficient grounds to fear any significant problem for Sundstrand customers.
38. In view of the foregoing it appears that the notified operation does not create or strengthen a dominant position as a result of which effective competition would be significantly impeded in the EEA or any substantial part of that area.

VI. CONCLUSION

39. For the above reasons, the Commission decides not to oppose the notified operation and to declare it compatible with the common market and with the EEA Agreement. This decision is adopted in application of Article 6(1)(b) of Council Regulation (EEC) No 4064/89.

For the Commission,