

Innovative answers to your questions

"COMPETITIVE POSITION AND FUTURE OPPORTUNITIES OF THE EUROPEAN MARINE SUPPLIES INDUSTRY"

> **Funded by the European Commission DG Enterprise and Industry** Contract No. SI2.630862

Final Report Annex 1

Structure of the Marine Supplies Industry



BALance Technology Consulting GmbH



Authors:

BALance Technology Consulting GmbH

Contrescarpe 33 D-28203 Bremen Germany

Tel.: +49 421335170 E-mail: balance@bal.eu

In co-operation with:

Shipyard Economics Ltd.

9 Woodcroft Road Wylam Northumberland NE41 8DJ United Kingdom

Tel.: +44 1661854218

E-mail: enquiries@shipyardeconomics.com

MC Marketing Consulting

Rödingsmarkt 39 D-20459 Hamburg Germany

Tel.: +49 4076758792

E-mail: info@jarowinsky-marketing.de

© European Commission, [2014]

The information and views set out in this study are those of the authors and do not necessarily reflect the official opinion of the Commission. Neither the Commission nor any person acting on the Commission's behalf may be held responsible for the use which may be made of the information contained therein.

Reproduction is authorized provided the source is acknowledged. The reproduction of any indicated third-party textual or artistic material in the report is prohibited.

January 2014

File: 2014-01-15 Annex 1_Final_Report_r8



Table of contents

0	Explanation	4
1	Propulsion, power generating system	5
2	Auxiliary power generation systems	8
3	Electrical systems, plants and cables	9
4	Instrumentation, control and navigation systems	10
5	Communication and entertainment systems	12
6	Lighting systems	14
7	Steering systems	15
8	Special ship operation systems	16
9	Mooring systems, deck machinery systems	17
10	Safety and life saving systems environmental protection systems	19
11	General outfitting components	21
12	Auxiliary (piping) systems	22
13	HVAC systems	27
14	Cargo systems	28
15	Accommodation systems	33
16	Others	36
17	Materials	37
18	Subcontracts (manufacturing and assembly)	38
19 classifica	Subcontractors and services (engineering, design, consulting, testing, tion)	39



0 Explanation

Appearing as a very heterogeneous industry, it must be stated that there is no formal structure available which classifies marine supply into dedicated categories. All parties which try to find a suitable categorisation find different solutions which serve more or less their own interests. Therefore, all information about marine equipment and materials provided for example by national associations, classification societies trade fairs etc. is structured differently and therefore difficult to compare. Names of products and services are chosen differently, higher aggregated groupings are assembled differently and also the assignment of individual companies may be seen differently by the interested parties.

Therefore, this study proposes a harmonised structure which is basically following the functional or system oriented view of the customers (shipyards, owners). With some amendments and aggregations especially for materials and the different areas of subcontracting a total of 19 system groups including 69 subgroups for equipment, 10 subgroups for materials and 16 subgroups for subcontracting have been identified.

It has to be admitted that this already quite complex structure may not cover all possible aspects of maritime systems. Especially those for offshore operation (production, processing, drilling, exploration etc.) may not be sufficiently mapped. This structure shows on the one hand the complexity of maritime systems and components and on the other hand provides an access point to evaluate which industry sectors are involved in maritime supplies. It also means that this structure allows a mapping into the systematic statistical systems, which at least allows to identify those statistical industry categories containing maritime supplies. The statistical classification system in use in Europe is called the "General Industrial Classification of Economic Activities within the European Communities" (NACE). This system was in use as version NACE 1.1. until 2007/2008. From then on a revised NACE 2.0. is in use, which, unfortunately, applies a slightly different classification key. Following that, statistical data for the transition year 2008 show still some inconsistencies which are under discussion between the authors and Eurostat.

As a result from this study we provide in addition to the above described and identified system groups for shipbuilding and maritime industries an assignment to the classification system NACE 1.1. and NACE 2.0. It provides a logical link between the system groups and subgroups in the defined structure for the marine supplies industry and the NACE definition. This structure and NACE assignment of the industry makes it better possible to analyse the industrial sector and allows using statistical data of companies and industrial sectors available for these different NACE classes from national or European databases for analysis at least on higher aggregation levels.



1 Propulsion, power generating system

Marine Supplies "Systems Groups", "Systems"		rine Supplies Group Component", "Service"	Description "Component", "Service" NACE Revision 1 4 digits			Description	١	NACE Revision 2 4 digits	Description
			Complete diesel engine			Diesel engines			Manufacture of internal combustion piston engines for marine and
			Cylinder covers			Parts of diesel engines		Manufacture of engines and turbines, except	railway
			Spare parts			Marine propulsion	2811	aircraft, vehicle and cycle engines	Manufacture of parts of internal
			Crank cases		Manufacture of	compression-ignition engines		(excluding repair)	combustion piston engines for
	44	Discolou vius	Camshafts	0044	engines and turbines,				marine and railway
	11	Diesel engine	Cylinder lubricating devices	2911	except aircraft, vehicle and cycle				
1. Two Stroke Diesel			Tachometers		engines				
Propulsion Systems			Local instrument panels						
2. Four Stroke Diesel			Special tools				3312	Repair of machinery	
Propulsion Systems			Turbochargers						
3. Steam Turbine Propulsion Systems			Vibration dampers						
4. Gas Turbine			Complete steam turbine		Manufacture of	Steam and other vapour turbines		Manufacture of engines and turbines, except	Steam and other vapour turbines
Propulsion Systems			Speed governors		engines and turbines,				and parts of it
5. Diesel-, Turbo Electric Propulsion			Main condensers	2911	except aircraft, vehicle and cycle	Steam turbines for generation of electricity	2811	aircraft, vehicle and	Hydraulic turbines, waterwheels and regulators thereof and parts of
Systems	12	Steam turbine	Vacuum pumps		engines	,		cycle engines	it
6. POD Systems			Vacuum ejectors			Parts of vapour turbines			wind turbines and parts of it
7. CODAG Systems									
8. COGES Systems							3312	Repair of machinery	
			Complete main gas turbine aggregates			Gas turbines other than turbo- jets and turbo-propellers			Gas turbines other than turbo-jets and turbo-propellers
			Power turbines		Manufacture of	Joto and turbo-propellers	0011	Manufacture of engines and turbines, except	and turbo-propellers
	13	Gas turbine	Combustion chambers Compressor machines	2911	engines and turbines, except aircraft, vehicle and cycle engines	Parts of gas turbines (excl. turbo-jets and turbo-propellers	2811	aircraft, vehicle and cycle engines	Parts of gas turbines (excl. turbojets and turbo-propellers
			Starting machinery				3312	Repair of machinery	



Marine Supplies "Systems Groups", "Systems"	"Systems Groups", "Component		Description "Component", "Service"		ACE Revision 1 4 digits	Description	1	NACE Revision 2 4 digits	Description
			Turning gear			Gears			Gears
			Starting gear			Gear boxes and other speed		Manufacture of bearings, gears,	Gear boxes and other speed
			Complete main reduction			chargers	2815	gearing and driving elements	chargers
			gears		Manufacture of	Clutches and shaft couplings		ciements	Clutches and shaft couplings
	14	Gears and couplings	Main reduction gear casings, foundations, bolts	2914	bearings, gears, gearing and driving elements				
1. Two Stroke Diesel Propulsion Systems			Central gear plants				3312	Repair of machinery	
2. Four Stroke Diesel			Central gears						
Propulsion Systems 3. Steam Turbine			Central gear couplings						
Propulsion Systems			Propulsion propellers			Ships' or boats' propellers and blades therefore	2571	Manufacture of other fabricated metal	Ships' or boats' propellers and
4. Gas Turbine			Controllable pitch propellers		Manufacture of other	blades increiore	2071	products n.e.c.	blades therefore
Propulsion Systems	15	Propeller	Propeller nuts	2875	fabricated metal products n.e.c.				
5. Diesel-, Turbo Electric Propulsion			Rope guards		products fi.e.c.		3311	Repair of fabricated metal products	
Systems			Propeller blades					·	
6. POD Systems			Thrust shafts/bearings			Ball bearings			Roller bearings and Roller bearings and parts of
7. CODAG Systems			Turbine shafts			Roller bearings		Manufacture of	Cranks and crankshafts
8. COGES Systems			Turbine main/trust bearings		Manufacture of	Cranks and crankshafts	2815	bearings, gears, gearing and driving	Bearing housings and parts of
	16	Shafts and	Propeller shafts	2914	Manufacture of bearings, gears,	Other transmission shafts		elements	Other transmission shafts
	'`	bearings	Shaft bearings	2014	gearing and driving elements	Bearing housings			Other transmission elements
			Shaft seals			Other transmission elements			
			Gear wheels, shafts,			Parts of ball or roller bearings	3312	Repair of machinery	
			bearings			Parts of bearing housings			



Marine Supplies "Systems Groups", "Systems"		rine Supplies Group Component", "Service"	Description "Component", "Service"	N	ACE Revision 1 4 digits	Description	NACE Revision 2 4 digits		Description
1. Two Stroke Diesel Propulsion Systems 2. Four Stroke Diesel Propulsion Systems 3. Steam Turbine	17	Electrical Engines	Propulsion el. motors Gyropropeller el. Motors	3110	Manufacture of electric motors, generators and transformers	DC motors and generators AC motors and generators	2711	Manufacture of electric motors, generators and transformers	DC motors and generators AC motors and generators AC/DC
Propulsion Systems 4. Gas Turbine Propulsion Systems			POD Sets				3314	Repair of electrical equipment	Repair and maintenance of electrical motors
5. Diesel-, Turbo Electric Propulsion Systems		Alternate	Water Jets		Manufacture of		2813	Manufacture of pumps and compressors	Non-hydraulic equipment; except repair
6. POD Systems 7. CODAG Systems 8. COGES Systems	18	Propulsors		2912	pumps and compressors		3312		Repair of machinery



2 Auxiliary power generation systems

Marine Supplies "Systems Groups", "Systems"		ne Supplies Group nponent", "Service"	Description "Component", "Service"	N	IACE Revision 1 4 digits	Description		NACE Revision 2 4 digits	Description
			Main propulsion electrical generators			DC motors and generators			DC motors and generators
		Generator Sets				AC motors and generators		Manufacture of electric motors, generators and transformers	AC motors and generators
					Manufacture of electric	Generating-sets with compressionignition engines	2711		Generating-sets with compression-ignition engines
	21		Emergency generators	3110	motors, generators and transformers	Generating-sets n.e.c.			Generating-sets n.e.c.
			Electrical generators			Generating-sets with spark-ignition			Generating-sets with spark-ignition internal combustion engines
Auxiliary Power Generation Systems			Shaft generators			internal combustion engines	3313	Repair of electronic and optical equipment	Repair of electronic transformers (solid state), coils, chokes, and other inductors
			Complete aux. boilers			Watertube boilers			Watertube boilers
			Reheaters			Other vapour		Manufacture of steam	Other vapour generating boilers
		Auxiliary boilers	Economisers		Manufacture of steam generators, except	generating boilers	2530	generators, except central heating hot water boilers	Condensers for steam or other vapour power units
22	22	etc.	Soot blowers	2830	central heating hot	Condensers for			Parts of vapour generating boilers
			Air preheaters		water boilers	steam or other vapour power units			
			Exhaust gas boilers			Parts of vapour generating boilers	3311	Repair of fabricated metal products	Repair and maintenance of steam or other vapour generators



3 Electrical systems, plants and cables

Marine Supplies "Systems Groups", "Systems"		ne Supplies Group nponent", "Service"	Description "Component", "Service"	N	IACE Revision 1 4 digits	Description		NACE Revision 2 4 digits	Description	
			Main switchboards			Automatic circuit breakers			Automatic circuit breakers	
			DC switchboards			Isolating switches		Manufacture of electricity	Relays and contacts	
		Switchboards, control panels	High voltage switchboards			and make-and - break switches	2733	distribution and control apparatus	Plugs and sockets	
	31		Distribution switchboards	3120	Manufacture of electricity distribution and control apparatus	Relays and contacts			Numerical control panels Boards, panels, consoles	
			Starter centrals		т.	Plugs and sockets	3314	Repair of electrical equipment		
			Distribution panels			Numerical control panels			Repair and maintenance of distribution and control apparatus for electricity	
			Clean power switchboards			Boards, panels, consoles		очартопс		
Electrical Systems, Plants and Cables			Cable trays and fittings			Coaxial cables for data & control	0704	Manufacture of fibre optic	Optical fibre cable	
			Special cables			purposes	2731	cables	Optical libre cable	
	32	Cables		3130	Manufacture of insulated wire and cable	Electric conductors		Manufacture of other		
						Optical fibre cable	2732	electronic and electric wires and cables	manufacturing of insulated wire and cable made of steel, copper, aluminium	
			Batteries			Primary cells and batteries				
	33	Power supply, batteries	Battery boxes	3140	Manufacture of accumulators, primary cells and primary	Lead-acid accumulators	2720	Manufacture of batteries and accumulators	This class includes the manufacture of non- rechargeable and rechargeable batteries	
		Dationios	Battery chargers		batteries	Electric		and doddinalatoro	rechargeable and rechargeable batteries	
			Spare batteries			accumulators				



4 Instrumentation, control and navigation systems

Marine Supplies "Systems Groups", "Systems"	Marine Supplies Group "Component", "Service"		Description "Component", "Service"	NACE Revision 1 4 digits		Description		NACE Revision 2 4 digits	Description
1 - Integrated Bridge			Manoeuvre consoles, main consoles			Electrical apparatus for sound or visual signalling	2630	Manufacture of communication equipment	Burglar and fire alarm systems, sending signals to a control station
Systems 2 - Ship-management & Automation Systems 3 - Cargo Control	41	Control and alarm systems	Common automation systems Alarm/safety systems components	Manufacture of other electrical equipment n.e.c. Sigrature Si	Signal generators Indicator panels Electrical machines	3314	Repair of electrical equipment		
Systems			Automation equipment for main and aux. Engines			and apparatus having individual functions		очирнен	



Marine Supplies "Systems Groups", "Systems"		ine Supplies Group nponent", "Service"	Description "Component", "Service"	١	NACE Revision 1 4 digits	Description		NACE Revision 2 4 digits	Description
			Navigation & searching equipment			Radar apparatus Instruments and apparatus for	2651	Manufacture of instruments and appliances for measuring,	Flight recorders, search, detection, navigation, aeronautical, and nautical equipment, including sonabouys; environmental controls and automatic controls for appliances, temperature,
			Radar plants			navigation n.e.c.		testing and navigation	humidity and similar; fluid meters and counting devices; laboratory sc
			Decca, Loran, Omega etc.			Other instruments, appliances and		Manufacture of optical	- Optical measuring and checking devices and instruments, such as optical comparators, gun
			Cargo Control		Manufacture of instruments and	machines for measuring or checking	2670	instruments and photographic equipment	sighting and fire control equipment, optical alignment, test, and control equipment; photographic light meters, range finders, etc Optical instruments and lenses
1 - Integrated Bridge Systems			Gyroplants, Autocompasses					Manufacture of other	Levels, tape measures and similar hand tools, machinists' precision tools (except optical)
2 - Ship-management & Automation Systems	42	Navigation and measurement systems	Clinometers, Trim Indicators, Load Indicators	3320	appliances for measuring, checking, testing, navigating and other purposes, except	Regulatinginstruments and apparatus,	28,29	general-purpose machinery n.e.c.	
3 - Cargo Control Systems			Hydraulic or pneumatic control and display systems		industrial process control equipment	hydraulic or pneumatic	28,99	Manufacture of other special-purpose machinery n.e.c.	Alignment and tyre balancing equipment; balancing equipment (except wheel balancing)
							32,5	Manufacture of medical and dental instruments and supplies	Medical thermometers
						Instruments and apparatus, regulating or controlling n.e.c.	33,13	Repair of electronic and optical equipment	- Repair of flight recorders, search, detection, navigation, aeronautical, and nautical equipment, including sonabouys; environmental controls and automatic controls for appliances, temperature, humidity and similar; fluid meters and counting devices.



5 Communication and entertainment systems

Marine Supplies "Systems Groups", "Systems"	Marine Supplies Group "Component", "Service"		Description "Component", "Service"	NACE Revision 1 4 digits		Description	NACE Revision 2 4 digits		Description
51			Radio plant GMDSS			Radio transmission apparatus			Central office switching equipment, cordless
		Communication systems	Lifeboat radio equipment		Manufacture of television and radio	TV cameras	2630	Manufacture of communication	telephones (except cellular), PBX equipment, telephones, and data communications equipment, such as bridges, routers, and
	51		Telex systems, telefax	3220	transmitters and	Telephone stes		equipment	gateways; wireless telephone equipment, radio and television broadcast equipment.
			VHF/UHF telephones			Teleprinters			and tolevision broadcast equipment.
Communication and Entertainment Systems			Calling/command/crew call telephone plants			Electrical telephonic and telegraphic apparatus n.e.c.	9512	Repair of communication equipment	Repair of communications equipment (in combination with manufacturing)
eyeteme			Hotel management			Computers		Manufacture of	Except installation
52			Information management		Manufacture of computers and other	Terminals	2620	computers and peripheral equipment	
	52	Data processing	-	3002	information processing equipment			Other information	Installation of personal computers and
		Separate data processing			Printers, scanners	6209 technology and computer service activities		peripheral equipment	



Marine Supplies "Systems Groups", "Systems"	Mari "Com	ne Supplies Group nponent", "Service"	Description "Component", "Service"	N	IACE Revision 1 4 digits	Description		NACE Revision 1 4 digits	Description
			Film projectors			Radio receivers	00.44	Manufacture of electronic	Heads (pickup, recording, read/write, etc.),
			Television sets			Television	26.11	components	phonograph needles
			Video players		Manufacture of television and radio	projection equipment, video projectors		Manufacture of	
			CD players	3230	receivers, sound or video recording or reproducing apparatus	Colour television receivers	26.2	computers and peripheral equipment	Video beamers
		Entertainment 53 systems, audio, video	Sound amplifiers		and associated goods	Sound reproducing apparatus		Manufacture of	Telephone answering machines; broadcast studio equipment such as reproduction
			Tape recorders			record-players	26.3	communication equipment	equipment, transmitting and receiving antennas, paging equipment; radio and infrar remote control devices
Communication and Entertainment Systems	53						26,4	Manufacture of consumer electronics	Except: - heads (pickup, recording, read/write, etc.), phonograph needles - video beamers - telephone answering machines; broadcast studio equipment such as reproduction equipment, transmitting and receiving antennas, paging equipment; radio and infrared
							26.7	Manufacture of optical instruments and photographic equipment	Digital cameras
							28.23	Manufacture of office machinery and equipment (except computers and peripheral equipment)	Dictating machines
						33.13	Repair of electronic and optical equipment	Repair of heads (pickup, recording, read/write, etc.), phonograph needles	



6 Lighting systems

Marine Supplies "Systems Groups", "Systems"		ine Supplies Group "Component", "Service"	Description "Component", "Service"	NA	CE Revision 1 4 digits	Description	N	NACE Revision 2 4 digits	Description									
			Electric lighting			Lamp holders Plugs and sockets for cables	26.11	Manufacture of electronic components	Electronic connectors such as cylindrical, rack and panel, printed circuit, etc.; electronic switches, such as snap, toggle, rocker, etc., for use in electronic apparatus									
			systems for engine and boiler room - light fittings		Manufacture of electricity distribution and control apparatus		27.12	Manufacture of electricity distribution and control apparatus	Includes rewinding of armatures on a factory basis									
	61	Fittings - lighting system	Electric lighting systems for	3120			27.33	Manufacture of wiring devices	Plugs and sockets for a voltage <= 1.000 V (excl. lamp holders); electrical apparatus for switching electrical circuits, or for making connections to or in electrical circuits, for a voltage <= 1.000 V (excl. fuses, automatic circuit breakers and other ap									
			accommodation - light fittings				27.9	Manufacture of other electrical equipment	Manufacture of surge suppressors									
			Electric lighting system for decks and cargo hold - light fittings				33.14	Repair of electrical equipment	Repair and maintenance of distribution and control apparatus for electricity									
Lighting Systems			Electric lighting			Sealed beam lamp units			Sealed beam lamp units									
			systems for engine and boiler room - lights			Tungsten halogen lamps			Tungsten halogen lamps									
			boller room - lights			Filament lamps			Filament lamps									
			Electric lighting systems for			Ultra-violet or infra-red lamps			Ultra-violet or infra-red lamps									
			accommodation - lights		Manufacture	Manufacture of	Manufacture of	Monufacture of	Monufacture of	Manufacture of	Manufacture of	Manufacture of	Manufacture of		Portable electric lightening			Portable electric lightening
	62	Lights, electrical heaters	Electric lighting systems for decks and cargo holds - lights	3150	lighting equipment and electric lamps	Non-electrical lamps and lighting fittings	27.,4	Manufacture of electric lighting equipment	Non-electrical lamps and lighting fittings									
		Electrical heaters			Electric table, desk, beside or floor-standing lamps			Electric table, desk, beside or floor-standing lamps										
			Signal lights			Flashbulbs, flashcubes			Flashbulbs, flashcubes									
			Radiators			Other electric lighting fittings: searchlights, spotlights			Other electric lighting fittings: searchlights, spotlights									



7 Steering systems

Marine Supplies "Systems Groups", "Systems"	Marine Supplies Group "Component", "Service"		Description "Component", "Service"	NACE Revision 1 4 digits		Description		NACE Revision 1 4 digits	Description
			Steering gear complete Hydraulic oil systems		Manufacture of pumps	Hydraulic power engines and motors, hydraulic	2812	Manufacture of fluid power equipment	- Hydraulic equipment - Except repair
	71	Steering gear		2912	and compressors	system	3312	Repair of machinery	Repair
			Rudder blades		Manufacture of other fabricated metal products n.e.c.	Ship's or boat's propellers and	2599	Manufacture of other fabricated metal products	
	72	Rudder	Rudder carriers	2875		blades therefore		n.e.c.	
	12		Rudder stocks	- 2075		Forged or stamped articles of iron or steel, n.e.c.	3311	Repair of fabricated metal	
Steering Systems			Active Rudder propellers					products	Repair
			Rudder nuts			Bearings			
			Rudder stock bearings		Manufacture of	Cranks and Crankshafts	2815	Manufacture of bearings, gears, gearing and driving elements	Except repair
	73	Accessories	Rudder stuffing boxes	2914	bearings, gears,	Bearing housings		ag o.ooe	
73			Rudder stock linings		gearing and driving elements	Clutches and shaft couplings			
						Other transmission elements	3312	2 Repair of machinery	Repair



8 Special ship operation systems

Marine Supplies "Systems Groups", "Systems"		ne Supplies Group nponent", "Service"	Description "Component", "Service"	N	ACE Revision 1 4 digits	Description		NACE Revision 1 4 digits	Description
	81	Thrusters, special rudders	Side thrusters Transverse propellers	2875	Manufacture of other fabricated metal products n.e.c.	Ship's or boat's propellers and blades therefore	2599	Manufacture of other fabricated metal products n.e.c.	Except: - manufacture of cutlasses, swords, bayonets etc manufacture of hat-racks, hat-pegs, brackets and similar fixtures of base metal - metal safety headgear and other metal personal safety devices
		Roll-dumping,					3311	Repair of fabricated metal products	- repair of fabricated metal products Repair
	82	Roll-dumping, anti-heeling	Roll-Dumping, anti-	2912	Manufacture of pumps	Hydraulic power engines and	2812	Manufacture of fluid power equipment	- Hydraulic equipment - Except repair
	02	systems	heeling systems	2912	and compressors	motors, hydraulic system	3312	Repair of machinery	Repair
Special Ship Operation Systems			Stabilizer fins Stabiliser fin moving machinery 2912 Active stabiliser tanks			Hydraulic power engines and motors, hydraulic system	2812	Manufacture of fluid power equipment	- Hydraulic equipment - Except repair
	83	Active stabilisers			Manufacture of pumps and compressors	Pumps for liquids with a measuring device	2813	Manufacture of other pumps and compressors	Non-hydraulic equipment; except repair
			and pumps			Machines and apparatus for stream control	3312	Repair of machinery	Repair
	84	Others	Berthing aid Systems						



9 Mooring systems, deck machinery systems

Marine Supplies "Systems Groups", "Systems"	Mari "Con	ne Supplies Group nponent", "Service"	Description "Component", "Service"	N	IACE Revision 1 4 digits	Description		NACE Revision 1 4 digits	Description	
			Div. Anchors with chain			Anchors, grapnels and parts thereof			Except: - manufacture of cutlasses, swords, bayonets	
	91		Mechanical brakes, chain stoppers	2875	Manufacture of other fabricated metal products n.e.c.		2599	Manufacture of other fabricated metal products n.e.c.	- manufacture of cutlasses, swords, payoriets etc manufacture of hat-racks, hat-pegs, brackets and similar fixtures of base metal - metal safety headgear and other metal personal safety devices - repair of fabricated metal products	
							3311	Repair of fabricated metal products	Repair	
		-	Windlasses			Manually operated chain hoists			Except:	
Mooring Systems, Deck Machinery Systems			Hydraulic brakes			Winches and capstans	2822	Manufacture of lifting and handling equipment	repair and maintenance of handling equipment repair and maintenance of elevators and escalators	
	92	Winches	Towing winches	2922	Manufacture of lifting and handling equipment	Hydraulic jacks			- installation of materials handling equipment in buildings	
			Mooring winches			Pulley tackle and				
			Rollers			hoists	3312	Repair of machinery	Repair and maintenance of handling equipment	
			Capstans, warping winches				00.2	repair or madrimory	Topan and manufactor of harraning equipment	
			Towing Equipment			Cordage, rope,				
			Ropes		Manufacture of	cables, of abaca or other hard leaf				
	93	Ropes, fenders, towing systems	Fenders	1752	cordage, rope, twine	fibres, sisal, jute		Manufacture of cordage, rope, twine and netting	Except repair of fishing nets (including mending)	
		3 3,555	Loose Mooring Equipment		and netting	Cordage, rope, cables, other than for agricultural use			g mending)	



Marine Supplies "Systems Groups", "Systems"		ne Supplies Group ponent", "Service"	Description "Component", "Service"	N	ACE Revision 1 4 digits	Description		NACE Revision 2 4 digits	Description	
			Bollards			Reels for cables			Except: - manufacture of cutlasses, swords, bayonets	
			Chocks		Manufacture of other	Clasps, frames with clasps	2599	Manufacture of other fabricated metal products	etc manufacture of hat-racks, hat-pegs, brackets and similar fixtures of base metal	
	94	Accessories	Hawse-pipes	2875	fabricated metal	Cast articles of iron or steel		n.e.c.	- metal safety headgear and other metal personal safety devices - repair of fabricated metal products	
			Hawser drums				0044	Repair of fabricated metal	'	
							3311	products	Repair	
Mooring Systems, Deck Machinery			Lube oil systems			Spray guns and similar appliances			Including spray guns	
Systems			Deck cleaning machines			оттыст арриалосс		Manufacture of other	Except: - laboratory type distilling apparatus, laboratory centrifuges, laboratory ultrasonic cleaning	
			Hull cleaning machines		Manufacture of other	Other mechanical appliances for	2829	general-purpose machinery n.e.c.	machinery - repair other than repair of laboratory type distilling apparatus, laboratory centrifuges,	
	95 Lubrication and cleaning systems		Common cleaning equipment	2924	general purpose machinery n.e.c.	dispersing or spraying			laboratory ultrasonic cleaning machinery - repair	
							3312	Repair of machinery	Repair other than repair of laboratory type distilling apparatus, laboratory centrifuges, laboratory ultrasonic cleaning machinery	



10 Safety and life saving systems environmental protection systems

Marine Supplies "Systems Groups", "Systems"	Mari "Com	ne Supplies Group nponent", "Service"	Description "Component", "Service"	N	IACE Revision 1 4 digits	Description		NACE Revision 1 4 digits	Description
			Auxiliary vessels with			Lifeboats			Except repair and maintenance
			equipment		Building and repairing	Workboats	3012	Building of pleasure and	Manufacturing of lifeboats, workboats, Yachts, sailing boas, etc.
	101	Boats and lifeboats	Lifeboats with equipment	3512	of pleasure and sporting boats	Auxiliary boats		sporting boats	
							3315	Repair and maintenance of ships and boats	Repair and routine maintenance performed by floating dry-docks
	102	Davits, cranes,	Davits, cranes, ramps	2922	Manufacture of lifting and handling equipment	self-explaining	2822	Manufacture of lifting and handling equipment	self-explaining
1 Safety and Life		ramps				, ,	3312	Repair of machinery	Repair and maintenance of handling equipment
Saving Systems 2 Environmental Protection Systems	103	Life saving	Lifebuoys Rescue nets Life-jackets Thermal protection bags Survival suits	2524	Manufacture of other plastic products	self-explaining	3299	Other manufacturing n.e.c.	Plastics hard hats and other personal safety equipment of plastics
		equipment Lir ap Dis	Line-throwing appliances Distress signalling equipment	2960	Manufacture of weapons and ammunition, incl.	self-explaining	2540	Manufacture of weapons and ammunition	self-explaining
			Distress rockets		Protective firearms etc.		3311	Repair of fabricated metal products	Repair and maintenance of weapons and weapons systems



Marine Supplies "Systems Groups", "Systems"	Marine Supplies Group "Component", "Service		Description "Component", "Service" NACE Revision 1 4 digits		Description	NACE Revision 1 4 digits		Description	
1 Safety and Life Saving Systems 2 Environmental Protection Systems	104	MARPOL equipment	Oil skimmers Oil booms Oil transfer hoses Oil recovery bags Oil dispersion equipment Spray booms Chemicals	2924	Manufacture of other general purpose machinery n.e.c.	Machinery and apparatus for filtering/purifying water Machinery and apparatus n.e.c.	2829	Manufacture of other general-purpose machinery n.e.c.	Except: - laboratory type distilling apparatus, laboratory centrifuges, laboratory ultrasonic cleaning machinery - repair other than repair of laboratory type distilling apparatus, laboratory centrifuges, laboratory ultrasonic cleaning machinery - repair
							3312	Repair of machinery	Repair other than repair of laboratory type distilling apparatus, laboratory centrifuges, laboratory ultrasonic cleaning machinery



11 General outfitting components

Marine Supplies "Systems Groups", "Systems"	Mari	ne Supplies Group ponent", "Service"	Description "Component", "Service"	NA	ACE Revision 1 4 digits	Description	N	ACE Revision 1 4 digits	Description
			Ladders, platforms and			Ladders and steps			
			railings in ballast and fuel tanks			Pallets and similar platforms for handling goods			Except: - manufacture of cutlasses, swords, bayonets etc manufacture of hat-racks, hat-pegs, brackets and similar fixtures of base metal - metal safety headgear and other metal personal
			Ladders, platforms and railings in cargo tanks		Manufacture of other fabricated metal products n.e.c.	Cloth, grill, netting and fencing of aluminium wire		Manufacture of other	
	111	Stairs, ladders, catwalks, railings, etc.	Ladders, platforms and railings in cargo holds	2875		Hat-racks, hat-pegs, brackets and similar fixtures of base metal	2599	Manufacture of other fabricated metal products n.e.c.	safety devices - repair of fabricated metal products Ladders and steps -manufacture of metal household articles -manufacture of building components of zinc
			Ext. ladders, steps, gangways			Open-die forged			-metal goods for office use -safes, strongboxes, various metal articles
			Handrails, railing, railgates			Closed-die forged			
General Outfitting Components			Gratings			Other ware	3311	Repair of fabricated metal products	Repair
			Emergency doors			Doors, window-frames			
			watertight doors			and thresholds for doors of iron or steel			
			Spraytight doors						Except installation (erection) work of self- manufactured builders' carpentry and joinery of
	440	Openings and	Side scuttles	0040	Manufacture of		0540	Manufacture of doors	metal -manufacture of metal doors, windows and their
	112	closures	Windows	2812	builders' carpentry and joinery of metal		2512	and windows of metal	frames, shutters and gates
			Engine room skylights						- metal room partitions for floor attachment
			Galley skylights						
			Messroom skylights						
	113		Clear view screens	2612	Shaping and processing of flat glass	Toughened safety glass for use in other vehicles, aircraft, vessels, spacecraft	2312	Shaping and processing of flat glass	This class includes: - manufacture of toughened or laminated flat glass - manufacture of glass mirrors - manufacture of multiple-walled insulating units of glass



12 Auxiliary (piping) systems

Marine Supplies "Systems Groups", "Systems"	Ма	rine Supplies Group Component", "Service"	Description "Component", "Service"	NA	CE Revision 1 4 digits	Description	NA	CE Revision 1 4 digits	Description	
			Diesel oil separators			Machinery and apparatus for				
			Fuel oil separators			filtering/purifying liquids n.e.c.		Manufacture of other	manufacture of filtering or purifying	
1 - for Engine Operation 11 Fuel Systems			Stand by separators		Manufacture of other	Parts of machinery	2829	general purpose machinery n.e.c.	machinery and apparatus for liquids	
12 Lube Oil Systems	121	Separators	Div. simustan	2924	general purpose machinery n.e.c.	for filtering/purifying liquids				
13 Water Cooling Systems			Div. air water separators		machinery n.e.c.					
(Sea/Freshw.)									Repair other than repair of	
14 Steam, Condensate, Feed Water Systems							3312	Repair of machinery	laboratory type distilling apparatus, laboratory centrifuges, laboratory ultrasonic cleaning machinery	
15 Oil Waste Burning			Cooling water pumps			Pumps for dispensing				
16 Air Starting Systems			Air anditioning continu			fuel or lubricants		Manufacture of fluid	manufacture of hydraulic and	
17 Exhaust Systems			Air conditioning cooling compressors				2812	power equipment	pneumatic components (including hydraulic pumps	
2 for Chin Onerstian						Concrete pumps				
2 - for Ship Operation 21 Bilge-, Ballast Systems			Discharge pumps			Dosing and				
22 Trim Compensation			3.1.1			proportioning pumps				
Systems			Chlorine pumps					Manufacture of other	Manufacturing of: air or vacuum pumps	
23 Tank Heating	122	Pumps and compressors	Hydr. oil pumps	2912	Manufacture of pumps and compressors	Pumps for liquids, liquid elevators	2813	pumps and	air or other gas compressor oil, water and fuel pumps for motor	
24 Sounding, Overflow, Filling, Air Pipes			Lube oil pumps		·			compressors	vehicles hand pumps	
25 Other (Scupper Systems etc.)			Gas generator compressors			Turbo-compressors				
			Fuel pumps			Compressors for refrigerating equipment				
			Cargo pumps			romgorating equipment	0040	Denois of seathing		
			Diesel oil transfer pumps			Vacuum pumps	3312 Repair of machinery	ery Repair		
			Booster pumps			Div. Pumps				



Marine Supplies "Systems Groups", "Systems"		rine Supplies Group Component", "Service"	Description "Component", "Service"	N <i>A</i>	CE Revision 1 4 digits	Description	NA	CE Revision 1 4 digits	Description	
3 - for Cargo Operation			Separator water tanks			Reservoirs, tanks of iron or steel for gas			manufacture of reservoirs, tanks and similar containers of metal, of types normally installed as fixtures	
31 Liquid Gas Loading Systems							2529	Manufacture of other tanks, reservoirs and	for	
32 Oil Loading Systems			Lube oil tanks					containers of metal	storage or manufacturing use	
33 Products Loading Systems	123	Loose tanks	Fresh water tanks	2821	Manufacture of tanks, reservoirs and containers of metal	Reservoirs, tanks, for liquids			manufacture of metal containers for compressed or liquefied gas	
34 Other Loading Systems			Chlorine tanks		Containers of metal	Aluminium reservoirs, tanks				
35 Intertgas Systems			Condensate tanks			Aluminium containers		Repair of fabricated		
36 Cargo Hold Heating/Cooling			Cooling system tanks			for compressed or liquefied gas	3311	metal products	Repair of metal tanks	
37 Tank cleaning Drying			Cooming System tarms							
38 Hydraulic Systems			Cooling plants			Pressure-reducing valves		Manufacture of fluid	Manufacture of hydraulic and	
4 - for Accommodation		-	Drinking water systems			Valves for the control	2812	Manufacture of fluid power equipment	pneumatic valves	
41 Roomheating			,			of oleo hydraulic transmission				
42 Fresh Water Generation			Discharge systems			transmission				
43 Fresh Water Distribution			Lube oil transfer systems			Valves for the control of pneumatic		Manufacture of other	manufacture of industrial taps and valves, including regulating valves and intake taps	
44 Seawater Systems			Instrument air supply			transmission	2814	taps and valves	manufacture of sanitary taps and valves	
45 Sewage Systems	124	Valves and fittings	systems	2913	Manufacture of taps and valves	Otherstead	ł		manufacture of heating taps and valves	
46 Swimming Pool Systems		90				Other taps, cocks and valves				
47 HVAC Heating/Cooling			Distilled and make-up water systems			Process control valves				
Systems 48 Cold Store Systems						Check valves			Repair and maintenance services	
49 Other (Waste Handling, Laundry, etc.)			Feed water systems			Mixing valves	Repair of machinery		of taps, cocks, valves and similar appliances for pipes, boiler shells, tanks, vats or the like of metal	



Marine Supplies "Systems Groups", "Systems"	"C	rine Supplies Group Component", "Service"	Description "Component", "Service"		NACE Revision 1 4 digits	Description	NA	CE Revision 1 4 digits	Description
			Tank cleaning hatches			Other mechanical appliances for dispersing, projecting			manufacture of equipment for projecting, dispersing or spraying liquids or powders:
		Auxiliary	Deck washing		Manufacture of other	or spraying	2829	Manufacture of other general-purpose machinery n.e.c.	spray guns, fire extinguishers, sandblasting machines, steam cleaning machines etc.
	125	system aggregates	Swimming pool technology	2924	general purpose machinery n.e.c.				
			Pressurized air			Steam or sand blasting machines	3312	Repair of machinery	Repair other than repair of laboratory type distilling apparatus, laboratory centrifuges, laboratory ultrasonic cleaning machinery
			Fresh water coolers			Heat exchange units			manufacture of refrigerating or freezing industrial equipment,
5 - Fire Fighting, Deck Washing			Instrument air coolers			machinery for liquefying air or gases		Manufacture of non- domestic cooling and ventilation equipment	including assemblies of components - manufacture of air-conditioning
51 Water Systems			Service air coolers						machines, including for motor vehicles - manufacture of non-domestic fans - manufacture of heat exchangers
52 Foam Systems 53 Steam Systems			Lube oil coolers			Evaporators and condensers	2825		
54 Gas Systems (Co2, Inertgas, Halon, Powder)	100	Heaters and	Sea water cooling systems		Manufacture of non-	Absorption heat pumps			- manufacture of machinery for liquefying air or gas - manufacture of attic ventilation fans (gable fans, roof ventilators, etc.)
	126	coolers	Gas generator coolers	2923	domestic cooling and ventilation equipment	Other furniture			,
			Preheaters						
			Fuel oil preheaters						
			Heating coils in fuel oil tanks				3312	Repair of machinery	Repair
		E:	Exhaust gas coolers						
			Heat exchangers						



			Air filters			Machinery for			manufacture of filtering or purifying machinery and apparatus for	
			Lube oil filters			filtering/purifying water		Manufacture of other	liquids manufacture of distilling or	
			Diesel oil filters			Machinery for	2829	general-purpose machinery n.e.c.	rectifying plant for petroleum	
	127	Filters, cleaners	Fresh water filters	2924	Manufacture of other general purpose machinery	filtering/purifying liquids n.e.c.			refineries, chemical industries, beverage industries etc.	
		oloullo10	Starting air filters		n.e.c.	Oil or petrol filters			Dan air ath an than namain af	
			Ventilation air filters			Intake air filters	3312	Repair of machinery	Repair other than repair of laboratory type distilling apparatus,	
			Hydraulic oil filters			Distilling or rectifying plant			laboratory centrifuges, laboratory ultrasonic cleaning machinery	
			Fire hoses			Fire extinguishers			manufacture of equipment for	
			Sprinkler noses			Other mechanical appliances for	2829	Manufacture of other general-purpose	projecting, dispersing or spraying liquids or powders:	
		Fire fighting equipment	Fire fighting systems			dispersing or spraying	2029	machinery n.e.c.	spray guns, fire extinguishers, sandblasting machines, steam	
	128		Water cannons	2924	Manufacture of other general purpose machinery			Repair of machinery	cleaning machines etc.	
	120		CO2 Plants	2021	n.e.c.				Dan air ath an than namain af	
(See above)			Fire fighting systems foam				3312		Repair other than repair of laboratory type distilling apparatus, laboratory centrifuges, laboratory	
			Fire fighting systems steam						ultrasonic cleaning machinery	
			Cylinder lubricating devices			Oil or petrol-filters for internal combustion			manufacture of filtering or purifying machinery and apparatus for	
			Filters			engines			liquids manufacture of equipment for	
			Coolers			Spray guns and similar	2829	Manufacture of other general-purpose	projecting, dispersing or spraying liquids or powders:	
			Oil preheaters			appliances	2029	machinery n.e.c.	spray guns, fire extinguishers, sandblasting machines, steam	
	129	Main engine accessories		2924	Manufacture of other general purpose machinery n.e.c.				cleaning machines etc. manufacture of cooling towers and similar for direct cooling by means of re-circulated water	
			Fuel oil transfer and drain systems		110.0	Other mechanical appliances for projecting, dispersing				
			Fuel oil purification plants			or spraying	3312	Repair of machinery	Repair other than repair of laboratory type distilling apparatus, laboratory centrifuges, laboratory	
			Lube oil systems			Cooling towers and similar plant for direct cooling			laboratory centrifuges, laboratory ultrasonic cleaning machinery	



Marine Supplies "Systems Groups", "Systems"		rine Supplies Group Component", "Service"	Description "Component", "Service"	N.A	ACE Revision 1 4 digits	Description	NA	CE Revision 1 4 digits	Description
(See above)	1210	Special Liquid Gas Equipment	LNG/LPG Plants as a whole system Cooling Systems for liquid Cargo Loading/Discharging Systems for LPG/LNG in gaseous phase	2923	Manufacture of non- domestic cooling and ventilation equipment	Machinery for liquefying air or other gases Compression type units whose condensers are heat exchangers	2825	Manufacture of non- domestic cooling and ventilation equipment	manufacture of refrigerating or freezing industrial equipment, including assemblies of components - manufacture of air-conditioning machines, including for motor vehicles - manufacture of non-domestic fans - manufacture of heat exchangers - manufacture of machinery for liquefying air or gas - manufacture of attic ventilation fans (gable fans, roof ventilators, etc.)
			Indirect cooling/heating systems, cargo oil heating Heating systems for cargo			Machinery and apparatus for filtering or purifying gases, by liquid process	3312	Repair of machinery	Repair



13 HVAC systems

Marine Supplies "Systems Groups", "Systems"		ne Supplies Group nponent", "Service"	Description "Component", "Service"	N	IACE Revision 1 4 digits	Description		NACE Revision 1 4 digits	Description
			Ventilation/air condition systems for accommodation			Air conditioning machines, with refrigerating unit		Manufacture of a co	manufacture of refrigerating or freezing industrial equipment, including assemblies of components - manufacture of air-conditioning machines,
			Ventilation fan centrals			Air conditioning machines, without	2825	Manufacture of non- domestic cooling and ventilation equipment	including for motor vehicles - manufacture of non-domestic fans - manufacture of heat exchangers
HVAC Systems	131	HVAC	Air condition central units	central 2923	Manufacture of non- domestic cooling and	refrigerating unit			 manufacture of machinery for liquefying air or gas manufacture of attic ventilation fans (gable fans, roof ventilators, etc.)
,,,,,,	131 HVAC		Air condition distribution boxes		ventilation equipment	Window or wall air conditioning machines, self contained			
			Humidity regulation equipment			Other fans Parts of air conditioning machines	3312	Repair of machinery	Repair



14 Cargo systems

Marine Supplies "Systems Groups", "Systems"		ne Supplies Group nponent", "Service"	Description "Component", "Service"	N	IACE Revision 1 4 digits	Description		NACE Revision 1 4 digits	Description
			Cargo lifts			Tower cranes			manufacture of hand-operated or power-driven lifting, handling, loading or unloading machinery: pulley tackle and hoists, winches, capstans and
			Lifting/articulated board			Portal or pedestal jib cranes			jacks derricks, cranes, mobile lifting frames, straddle carriers etc.
			Roller conveyors			Lifts and skip hoists	2822	Manufacture of lifting and handling equipment	works trucks, whether or not fitted with lifting or handling equipment, whether or not self- propelled, of the type used in factories (including hand trucks and wheelbarrows)
1 - for Dry Cargo		Cranes etc.,	Travelling cranes		Manufacture of lifting	Escalators and moving walkways			mechanical manipulators and industrial robots specifically designed for lifting, handling, loading or unloading
2 - for Bulk Cargo 3 - for Container 4 - for Gas Carrier	141	sucker, conveyors, cargo lift	Mechanical shovels	2922	and handling equipment				- manufacture of conveyors, teleferics etc manufacture of lifts, escalators and moving walkways - manufacture of parts specialised for lifting and handling equipment
5 - for Tanker 6 - for Fishing Vessel			Pneumatic plants for bulk cargo handling			Pneumatic elevators and conveyors, other	3312	Repair of machinery	Repair and maintenance of handling equipment
7 - Dredgers			Cargo shifting boards			for bulk material		2 Repair of madrinery	
8 - Reefer Vessel 9 - Construction,			Deck cranes for cargo Grabbing/lifting equipment for cranes.			Continuous-action elevators and conveyors	4329	Other construction installation	Repair and maintenance of elevators and escalators
Production Vessel			Masts and booms			Lifting machinery			
			Patent hatches Hatch sections Cargo tank hatches			Doors, window- frames and thresholds for doors of iron or steel	2512	Manufacture of doors and windows of metal	Except installation (erection) work of self- manufactured builders' carpentry and joinery of metal
					Manufacture of				
	142	Provis	Grain hatches	2812	builders' carpentry and joinery of metal				
			Provision hatches Emergency hatches				4332	Joinery installation	Installation (erection) work of self-manufactured builders' ware of metal
			Tank cleaning hatches						Dulluels wate of filetal
1 - for Dry Cargo	143	RO-RO	Bow ports	2812	Manufacture of	Doors, window-	2512	Manufacture of doors and	Except installation (erection) work of self-



Marine Supplies "Systems Groups", "Systems"	Marii "Com	ne Supplies Group ponent", "Service"	Description "Component", "Service"	N	IACE Revision 1 4 digits	Description		NACE Revision 1 4 digits	Description
2 - for Bulk Cargo		Equipment	Driving ramps		builders' carpentry and joinery of metal	frames and thresholds for doors		windows of metal	manufactured builders' carpentry and joinery of metal
3 - for Container			Stern ports		Joinery of Metal	of iron or steel			metal
4 - for Gas Carrier			Side ports						
5 - for Tanker			Lifting/lowering				4332	Joinery installation	Installation (erection) work of self-manufactured builders' ware of metal
6 - for Fishing Vessel			machinery						
7 - Dredgers			Locking devices			Pallets and similar platforms for			Except:
8 - Reefer Vessel			Platforms			handling goods		Manufacture of other	- manufacture of cutlasses, swords, bayonets etc.
9 - Construction,							2599	Manufacture of other fabricated metal products	- manufacture of hat-racks, hat-pegs, brackets and similar fixtures of base metal
Production Vessel	144	Cargohold outfitting	Grain feeders	2875	Manufacture of other fabricated metal products n.e.c.	Forged or stamped articles of iron or steel		n.e.c.	- metal safety headgear and other metal personal safety devices - repair of fabricated metal products
			Grating		products n.c.c.	Steel			,,
			Protection covers						
			Pallets				3311	Repair of fabricated metal products	Repair
			Fish crates					producto	
			LNG Tanks			Reservoirs, tanks of iron or steel for gas			manufacture of reconveirs tople and similar
			LPG Tanks			Reservoirs, tanks, for liquids	2529	Manufacture of other tanks, reservoirs and	manufacture of reservoirs, tanks and similar containers of metal, of types normally installed as fixtures for
			Spherical Tanks		Manufacture of tanks.	Aluminium reservoirs, tanks		containers of metal	storage or manufacturing use manufacture of metal containers for compressed or liquefied gas
	145	LNG/LPG Tanks		2821	reservoirs and	Aluminium			
					Containers of metal	containers for compressed or liquefied gas			
			Membrane Tanks				3311	Repair of fabricated metal products	Repair of metal tanks
			Semi-Pressurized Tanks					,	
1 - for Dry Cargo 2 - for Bulk Cargo	146	Fishing Vessel Equipment Systems	Fishing nets	1752	Manufacture of cordage, rope, twine and netting	Made up fishing nets made from twine, cordage, rope	1394	Manufacture of cordage, rope, twine and netting	manufacture of twine, cordage, rope and cables of textile fibres or strip or the like, whether or not impregnated, coated, covered or sheathed with rubber or plastics



Marine Supplies "Systems Groups", "Systems"	Mari "Com	ne Supplies Group nponent", "Service"	Description "Component", "Service"	N	IACE Revision 1 4 digits	Description		NACE Revision 1 4 digits	Description
3 - for Container4 - for Gas Carrier5 - for Tanker			Fish traps						- manufacture of knotted netting of twine, cordage or rope - manufacture of products of rope or netting: fishing nets, ships' fenders, unloading cushions, loading slings, rope or cable fitted with metal rings etc.
6 - for Fishing Vessel 7 - Dredgers			Purse nets			Other made up fishing nets of nylon, polyamides			Tope of cable inted with metal rings etc.
8 - Reefer Vessel			Scoop nets			or other	1752	Repair of other equipment	Repair of fishing nets (including mending)
9 - Construction, Production Vessel			Trawler winches	2922	Manufacture of lifting and handling equipment	Continuous-action elevators and conveyors	2822	Manufacture of lifting and handling equipment	manufacture of hand-operated or power-driven lifting, handling, loading or unloading machinery: pulley tackle and hoists, winches, capstans and jacks derricks, cranes, mobile lifting frames, straddle carriers etc. works trucks, whether or not fitted with lifting or handling equipment, whether or not self-propelled, of the type used in factories (including hand trucks and wheelbarrows) mechanical manipulators and industrial robots specifically designed for lifting, handling, loading or unloading - manufacture of conveyors, teleferics etc manufacture of lifts, escalators and moving walkways - manufacture of parts specialised for lifting and handling equipment
			Longline windlass				3312	Repair of machinery	Repair and maintenance of handling equipment
			Fish pumping plants			Lifting machinery	4329	Other construction installation	Repair and maintenance of elevators and escalators
1 - for Dry Cargo 2 - for Bulk Cargo 3 - for Container	146	Fishing Vessel Equipment Systems	Fishing sonar	3320	Manufacture of instruments	Instruments	2651	Manufacture of instruments and appliances for measuring, testing and navigation	- Flight recorders, search, detection, navigation, aeronautical, and nautical equipment, including sonabouys; environmental controls and automatic controls for appliances, temperature, humidity and similar; fluid meters and counting devices; laboratory sc



Marine Supplies "Systems Groups", "Systems"	Marine Supplies Group "Component", "Service		N	IACE Revision 1 4 digits	Description		NACE Revision 1 4 digits	Description
4 - for Gas Carrier5 - for Tanker6 - for Fishing Vessel7 - Dredgers						3313	Repair of electronic and optical equipment	- Repair of flight recorders, search, detection, navigation, aeronautical, and nautical equipment, including sonabouys; environmental controls and automatic controls for appliances, temperature, humidity and similar; fluid meters and counting devices.
8 - Reefer Vessel 9 - Construction, Production Vessel		Fish Processing Plants Raw material handling			Nace Rev.1 2953 explanations	2893	Manufacture of machinery for food, beverage and tobacco processing	manufacture of machinery for the extraction or preparation of animal or vegetable fats or oils
		Fillet factories Shrimp factories Meal and oil factories Surimi factories	2953	Manufacture of machinery for food, beverage and tobacco processing	Machinery for the preparation of meat or poultry Machinery for the extraction/ preparation of animal/ vegetable fats or oil	3312	Repair of machinery	Repair



Marine Supplies "Systems Groups", "Systems"		e Supplies Group Component", "Service"	Description "Component", "Service"	N	IACE Revision 1 4 digits	Description		NACE Revision 1 4 digits	Description
			Dredge pumps				2812	Manufacture of fluid power equipment	manufacture of hydraulic and pneumatic components (including hydraulic pumps,
		2		2912	Manufacture of pumps and compressors		2813	Manufacture of other pumps and compressors	manufacture of air or vacuum pumps, air or other gas compressors - manufacture of pumps for liquids whether or not fitted with a measuring device - manufacture of pumps designed for fitting to internal combustion engines: oil, water and fuel pumps for motor vehicles etc.
	147	Special Equipment for				self-explaining	3312	Repair of machinery	Repair
1 - for Dry Cargo2 - for Bulk Cargo3 - for Container4 - for Gas Carrier		Dredgers	Bucket chain	2922	Manufacture of lifting and handling equipment		2822	Manufacture of lifting and handling equipment	manufacture of hand-operated or power-driven lifting, handling, loading or unloading machinery manufacture of conveyors, teleferics etc manufacture of lifts, escalators and moving walkways - manufacture of parts specialised for lifting and handling equipment
5 - for Tanker 6 - for Fishing Vessel			Backhoe equipment Wheel ladder equipment				3312	Repair of machinery	Repair
7 - Dredgers 8 - Reefer Vessel 9 - Construction, Production Vessel	148	Special Equipment for Construction Vessels	Cable handling equipment	2922	Manufacture of lifting and handling equipment	self-explaining	2822	Manufacture of lifting and handling equipment	manufacture of hand-operated or power-driven lifting, handling, loading or unloading machinery manufacture of conveyors, teleferics etc manufacture of lifts, escalators and moving walkways - manufacture of parts specialised for lifting and handling equipment
		Vessels	Pipe handling equipment Heavy lifting gear	- ' ' '			3312	Repair of machinery	Repair
			Chains, Tie rods				2593	Manufacture of wire products, chain and springs	Manufacture of chains and springs
	149	Lashing Equipment	Twist locks	2874	Manufacture of fasteners, chains, springs	self-explaining	2594	Manufacture of fasteners and screw machine products	manufacture of rivets, washers and similar non- threaded products - manufacture of screw machine products - manufacture of bolts, screws, nuts and similar threaded products



15 Accommodation systems

Marine Supplies "Systems Groups", "Systems"		ne Supplies Group aponent", "Service"	Description "Component", "Service"	N	IACE Revision 1 4 digits	Description		NACE Revision 1 4 digits	Description
			Bulkhead/wall panelling Pre-insulated bulkhead panelling			Prefabricated buildings of iron or steel	2511	Manufacture of metal structures and parts of structures	manufacture of metal frameworks or skeletons for construction and parts thereof
	454	Frames, walls,	panoining	0044	Manufacture of metal		2433	Cold forming or folding	Manufacture of cold-formed or cold-folded, ribbed sheets and sandwich panels.
1 - Preprepared	151	staircases - :		2811	structures and parts of structures	Ladders	3311	Repair of fabricated metal products	Repair of metal structures
Cabins		-	Steps, ladders			Stairs			
2 - Galley and Cafeteria Systems		-	Staircases			Staircases	4120	Construction of residential and non-residential	Assembly and installation of self-manufactured buildings of metal on site
3 - Lounges, Dining			Walls			Structures of iron or steel		buildings	
Room Systems 4 - Special Room			Sliding doors			Doors, window- frames and			
Systems (Theatres,			Gastight doors			thresholds for doors of iron or steel		Manufacture of doors and	Doors, window-frames and thresholds for doors
Casino, etc.) 5 Ship Functional	152	Doors and	Stores doors	2812	Manufacture of builders' carpentry and		2512	windows of metal	of iron or steel
Room System	102	openings	Sliding windows Window recesses	2012	joinery of metal				
							4332	Joinery installation	Installation (erection) work of self-manufactured builders' ware of metal
			Personnel elevators			Lifts and skip hoists	2822	Manufacture of lifting and handling equipment	
	153 Lifts E	Escalators	2922	Manufacture of lifting and handling equipment	Escalators and moving walkways	3312	Repair of machinery	Repair and maintenance of handling equipment	
					- 1	J , ,	4329	Other construction installation	Repair and maintenance of elevators and escalators



Marine Supplies "Systems Groups", "Systems"	Mari "Com	ne Supplies Group nponent", "Service"	Description "Component", "Service"	N	NACE Revision 1 4 digits	Description		NACE Revision 1 4 digits	Description
1 - Preprepared Cabins	154	Sanitation objects and appliances	Shower cabinets Standard toilets Washstands Vacuum toilets Wash basins w/ equipment	2622	Ceramic	Ceramic sinks, wash basins, baths and other sanitary fixtures n.e.c.	2342	Manufacture of ceramic sanitary fixtures	Ceramic sinks, wash basins, baths and other sanitary fixtures n.e.c.
2 - Galley and Cafeteria Systems 3 - Lounges, Dining Room Systems 4 - Special Room Systems (Theatres, Casino, etc.) 5 Ship Functional Room System	155	Electric domestic appliances	Refrigerators Grills, ovens Boilers Mixers Potato peeling machines Coffeemakers Ice cubers Dishwashing machines Clothing washing machines	2971	Manufacture of electric domestic appliances	Refrigerators Freezers Fully-automatic washing machines Drying machines Vacuum cleaners Food mixers, processors, blenders Irons	2751	Manufacture of electric domestic appliances	manufacture of domestic electric appliances: refrigerators, freezers, dishwashers, washing and drying machine, vacuum cleaners - manufacture of domestic electrothermic appliances: electric water heaters, electric blankets, electric dryers, combs, brushes, curlers, electric smoothing ironsspace heaters and household-type fans, portable electric ovens microwave ovens, cookers, hotplates, toasters, coffee or tea makers, fry pans, roasters, grills, hoods, electric heating resistors etc.
			Ironing machines			Microwave ovens	3314	Repair of electrical equipment	Repair and maintenance of professional electric appliances



Marine Supplies "Systems Groups", "Systems"		arine Supplies Group Component", "Service"	Description "Component", "Service"	N/	ACE Revision 1 4 digits	Description		NACE Revision 1 4 digits	Description
			Deck tables, chairs			Metal furniture n.e.c.			
			Furniture, inventory, entertainment equipment			Wooden furniture for the bedroom			manufacture of sofas, sofa beds and sofa sets
		Functions	Office equipment		Manufacture of other furniture	Wooden furniture for dining and living room	3109	Manufacture of other furniture	- manufacture of garden chairs and seats - manufacture of furniture for bedrooms, living rooms, gardens etc manufacture of cabinets for sewing machines, televisions etc. This class also includes: - finishing such as upholstery of chairs and seats - finishing of furniture such as spraying, painting, French polishing and upholstering
1 - Preprepared Cabins	156	Furniture and decoration	Decorations	3614					
2 - Galley and Cafeteria Systems			Hobby, sports equipment			Furniture of plastics			
3 - Lounges, Dining			Furniture for passengers			Furniture of other materials n.e.c.			
Room Systems 4 - Special Room			Galley/pantry equipment						
Systems (Theatres, Casino, etc.)			Cafeteria/bar equipment			Parts of furniture	9524	Repair of furniture and home furnishings	Repair, maintenance and restoration services for other furniture
5 Ship Functional Room System			Workbenches			Metal furniture n.e.c.			
			Worktables			Wooden furniture n.e.c.			manufacture of sofas, sofa beds and sofa sets - manufacture of garden chairs and seats
			Lockers	-		11.6.0.			manufacture of furniture for bedrooms, living rooms, gardens etc. manufacture of cabinets for sewing machines.
		Workshop	Shelves/racks		Manufacture of		3109	Manufacture of other furniture	televisions etc. This class also includes:
	157	Outfitting	Tools boards	3614	other furniture		1		- finishing such as upholstery of chairs and seats
									- finishing of furniture such as spraying, painting, French polishing and upholstering
							9524	Repair of furniture and home furnishings	Repair, maintenance and restoration services for other furniture



16 Others

Marine Supplies "Systems Groups", "Systems"	Mari "Com	ne Supplies Group ponent", "Service"	Description "Component", "Service"	N	ACE Revision 1 4 digits	Description		NACE Revision 1 4 digits	Description
			Blow out Preventer						
			Christmas-Tree Assembly						
	404	Special Offshore	Coiled Tubing Injector Unit		Manufacture of			Installation of industrial	
	161	Equipment	Kill and Choke Equipment	29	machinery and equipment n.e.c.	Self-explaining	3320	machinery and equipment	Various manufacturing/installation activities
			Mud and Cementing Equipment						
			Wellhead Equipment						
			Diving support systems						
Others	162	Special Underwater	Diving systems	29	Manufacture of machinery and	Self-explaining	3320	Installation of industrial	Various manufacturing/installation activities
		Equipment	Hyperbaric rescue chambers		equipment n.e.c.	Jan 1 par g		machinery and equipment	3
			Hydrophones						
		Special Navy	Weapon Systems		Manufacture of		2540	Manufacture of weapons and ammunition	Self-explaining
	163	Systems, Acoustics and	Combat simulation	296	weapons and ammunition	Self-explaining		and animanition	
		Weapon Systems	systems		ammunition		3311	Repair of fabricated metal products	Repair and maintenance of weapons and weapons systems
	404								
	164	Miscellaneous				Self-explaining			



17 Materials

Marine Supplies "Systems Groups", "Systems"		ne Supplies Group nponent", "Service"	Description "Component", "Service"	N	ACE Revision 1 4 digits	Description		NACE Revision 1 4 digits	Description
	171	Steel Plates/Profiles	Self-explaining	271	Manufacture of basic iron and steel and of ferro-alloys (ECSC)	Self-explaining	2410	Manufacture of basic iron and steel and of ferro-alloys	Self-explaining
	172	Steel - Pipes	Self-explaining	272	Manufacture of tubes	Self-explaining	2420	Manufacture of tubes, pipes, hollow profiles and related fittings, of steel	Self-explaining
	173	Non-Ferro Metals	Plates, Profiles, Fittings	274	Manufacture of basic precious and non-ferrous metals	Self-explaining	2441	Precious metals production	Self-explaining
	174	Rubber and Plastics	Floor coverings, carpets	25	Manufacture of rubber and plastic products	Self-explaining	2200	Manufacture of rubber and plastic products	Self-explaining
	175	Glass and Ceramics	Self-explaining	26	Manufacture of rubber and plastic products	Self-explaining	2300	Manufacture of other non- metallic mineral products	Self-explaining
Materials	176	Textile Products	Floor coverings, carpets	175	Manufacture of other textiles	Self-explaining	1390	Manufacture of other textiles	Self-explaining
	177	Assembly material	(Screws, nuts, bolts, hoists etc.)	287	Manufacture of other fabricated metal products	Self-explaining	2590	Manufacture of other fabricated metal products	Self-explaining
	178	Welding material	Self-explaining	287	Manufacture of other fabricated metal products	Self-explaining	2590	Manufacture of other fabricated metal products	Self-explaining
	179	Paint and	Paint (Hull, decks, cargo holds, engine room, accommodation)	2430	Manufacture of paints, varnishes and similar	Self-explaining	2030	Manufacture of paints, varnishes and similar	Self-explaining
	179	Coatings	Coatings (Tanks, anodes etc.)	2.00	coatings, printing ink and mastics	Self-explaining		coatings, printing ink and mastics	Self-explaining
	1710	Insulation Material	Engine room insulation Insulation all rooms Cargohold insulation	268	Manufacture of other non-metallic mineral products	Self explaining	2399	Manufacture of other non- metallic mineral products	Self explaining



18 Subcontracts (manufacturing and assembly)

Marine Supplies "Systems Groups", "Systems"		ne Supplies Group nponent", "Service"	Description "Component", "Service"	N	IACE Revision 1 4 digits	Description		NACE Revision 1 4 digits	Description
	181	Steel Section and	Steel Sections from subassemblies up to	3511	Building and repairing	self explaining	3011	Building of ships and floating structures	self explaining
	101	Modules	complete Deckhouses, Bow-Sections etc.	3311	of ships	seli explaitiirig	3315	Repair and maintenance of ships and boats	self explaining
	182	Pipes and Pipe Sub-assemblies	Pre-assembly and/or onboard assembly		Plumbing incl. Pipes and sanitary	self explaining		Dhashian hastandain	self explaining
	183	HVAC Ducts and subassemblies	Duct Pre-fabrication and/or HVAC onbord assembly	4533	equipment, Heating, Ventilation, Air Condition etc.	self explaining	4322	Plumbing, heat and air- conditioning installation	self explaining
	184	Electrical Installation	onbord assembly incl./or excl. of material provision	4531	Installation of electrical wiring and fittings	self explaining	8020	Security systems service activities	self explaining
Manufacturing and	185	Insulation	onbord assembly incl./or excl. of material provision	4532	Insulation work activities	self explaining	4329	Other construction installation	self explaining
Assembly	186	Painting	onbord assembly incl./or excl. of material provision	4544	Painting and glazing	self explaining	4334	Painting and glazing	self explaining
	187	Joinery	onboard assembly	4542/ 4543	Joinery Installation/ Floor and Wall covering	self explaining	4332/ 4333	Joinery Installation/ Floor and Wall covering	self explaining
	188	Scaffolding	onbord assembly incl./or excl. of material provision	4525	Other construction work incl. scaffolding	self explaining	4399	Other specialised construction activities n.e.c.	self explaining
	189	Cleaning	self explaining	7470	Industrial cleaning	self explaining	8122	Other building and industrial cleaning activities	self explaining
	1810	Casting of Metals	self explaining	275	Casting of Metals	semi-finished products and various castings produced for third parties according to their specification	2450	Casting of Metals	This group includes the manufacture of semi- finished products and various castings by a casting process.



19 Subcontractors and services (engineering, design, consulting, testing, classification)

Marine Supplies "Systems Groups", "Systems"	Marii	ne Supplies Group nponent", "Service"	Description "Component", "Service"		IACE Revision 1 4 digits	Description		NACE Revision 1 4 digits	Description
	191	Classification, Type approval	approval of design, supervision of construction, certificates	743	Testing of calculations, certification of ships	self explaining	71.2	Technical testing and analysis	self explaining
	192	Model Testing, CFD	hydro dynamical calculations, CFD						
	193	Conceptual Design	Basic Ship Design incl. Hydrostatic, FE analysis etc.	742	Architectural and engineering activities and related technical consultancy	self explaining	7112	Engineering activities and related technical consultancy	Engineering activities and related technical consultancy
	194	Construction Drawings	workshop drawings, CAD		,				
1 Engineering + Design 2 Test, Control, Authorities	195	R&D Institute University	self explaining	731	Research and experimental development on natural sciences and engineering	self explaining	7219	Other research and experimental development on natural sciences and engineering	- Systematic studies and creative efforts in the three types of research and development defined above, in natural sciences except biotechnology (mathematics, physics, astronomy, chemistry, life sciences, medical sciences, earth sciences, agriculture, etc
3 Special Shipyard Services (Transport, Maintenance, Waste Handling,)	196	Authorities	self explaining	751	Administration of the State and the economic and social policy of the community	self explaining	8410	Administration of the State and the economic and social policy of the community	self explaining
4 Supply Chain Support, Consulting, IT Services, R&D etc.	197	Associations	self explaining	9111	Activities of business, employers' and professional organizations	self explaining	9411	Activities of business, employers' and professional organizations	self explaining
	198	Supply Chain Support, Consulting	self explaining	741	Advice and help to businesses in planning organisation, efficiency and control, management information, Project Management	self explaining	7022	Business and other management consultancy activities	self explaining
	199	Computer Services	self explaining	72	Hardware consultancy, software consultancy and supply, data processing, database activities, maintenance	self explaining	6200	Computer programming, consultancy and related activities including consultancy activities	self explaining