Diesel & Gas Turbine WORLDWIDE 2021

MARINE PROPULSION ORDER SURVEY

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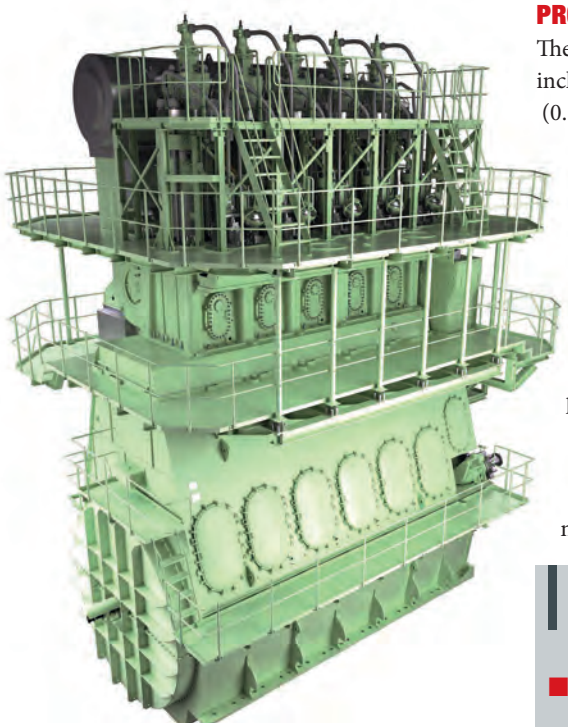
MARINE PROPULSION

A snapshot of the global marine engine market for the calendar year 2020. By **Jack Burke**

When Diesel & Gas Turbine Worldwide published its first Marine Propulsion Order Survey more than 20 years ago, it was simply designed to provide details on the markets of large reciprocating engines used in marine propulsion applications. The Marine Propulsion Order Survey examines mechanical drive, auxiliary and diesel-electric marine propulsions systems.

We ask individual OEMs to share with us their sales data, including number of units sold and in what regions. That information has never been shared – only the composite numbers are used in the survey. Not every company chooses to participate – historically, the magazine has had little success in getting numbers from Chinese manufactures, for example. Our hope is that most major manufacturers submit data and the survey can represent a solid snapshot of what happened in the marine market in the previous year. The marine survey is one of the few remaining neutral sources of market data available to the public at no charge.



PROCEDURES FOR THE SURVEY

The Marine Propulsion Order Survey includes drivers beginning at 500 kW (0.5 MW). New orders are broken into diesel-electric, mechanical drive and auxiliary generating set orders. Fuel types include diesel fuel, heavy fuel and natural gas. All data found in the survey was provided by participating original equipment manufacturers (OEMs). An accompanying table identifies those companies that participated in the 2020 survey.

Every effort is made to ensure this survey is as complete and comprehensive as possible and it would not have the level of detail it contains without the generous contributions of the participating companies. It is important to note that the data in this survey does not represent units shipped, but only the total orders received during calendar year 2020. Geographic location refers to the shipbuilding site. For reference, the geographic breakdown that was presented to participating OEMs along with the survey forms is included in this report. It is important to note, some units reported in the 2020 Marine Propulsion Order Survey did not have complete information. In some cases OEMs chose not to provide engine output, fuel type or geography for some of their reported orders.

The marine survey has remained relatively unchanged in the past 20-some years, but with the growing diversity in fuel choices and propulsion systems, Diesel & Gas Turbine Worldwide will be working with OEMs to refine the survey so it better captures the marine market. Look for an updated survey format in 2022. ■

MARINE SURVEY PARTICIPANTS

■ Caterpillar ■ IHI Marine ■ Kawasaki ■ KHI ■ MAN ES ■ WinGD ■ Yanmar

ORDER SURVEY 2021

MECHANICAL DRIVE RECIPROCATING ENGINE ORDERS, January - December 2020

Output Range (MW)	Number of Units	Total Engine Output for Each Output Range (MWe)	Engine operating speed ranges				Fuel			Western Europe	Eastern Europe, Russia & CIS	Middle East	Far East	Southeast Asia & Australia	Central Asia	North Africa	Central, West, East & South Africa	North America	Central America & Caribbean	South America
			Below 300 r/pm	300 to 600 r/pm	720 to 1000 r/pm	Above 1000 r/pm	Diesel Fuel	Heavy Fuel	Natural Gas											
.50 to 1.00	1296	845	0	0	19	1277	1296	0	0	250	2	24	472	294	34	4	2	150	11	53
1.01 to 2.00	574	801	0	0	99	475	574	0	0	218	4	11	153	104	2	0	0	78	0	4
2.01 to 3.50	33	98	17	0	16	0	16	17	0	2	0	0	31	0	0	0	0	0	0	0
3.51 to 5.00	26	108	25	0	1	0	1	22	3	0	0	0	26	0	0	0	0	0	0	0
5.01 to 7.50	65	405	65	0	0	0	6	51	8	0	0	0	65	0	0	0	0	0	0	0
7.51 to 15.00	408	4616	408	0	0	0	14	350	44	0	3	0	405	0	0	0	0	0	0	0
15.01 to 30.00	231	4086	231	0	0	0	3	119	109	0	0	0	231	0	0	0	0	0	0	0
30.01 to 50.00	58	1987	58	0	0	0	9	45	4	0	0	0	58	0	0	0	0	0	0	0
50.01 and above	24	1598	24	0	0	0	9	15	0	0	0	0	24	0	0	0	0	0	0	0
TOTALS	**2715**	**14544**	**828**	**0**	**135**	**1752**	**1928**	**619**	**168**	**470**	**9**	**35**	**1465**	**398**	**36**	**4**	**2**	**228**	**11**	**57**

MARINE AUXILIARY GENERATING SET ORDERS, January - December 2020

Output Range (MW)	Number of Units	Total Engine Output for Each Output Range (MWe)	Engine operating speed ranges			Fuel		Western Europe	Eastern Europe, Russia & CIS	Middle East	Far East	Southeast Asia & Australia	Central Asia	North Africa	Central, West, East & South Africa	North America	Central America & Caribbean	South America
			300 to 600 r/pm	720 to 1000 r/pm	Above 1000 r/pm	Diesel Fuel	Heavy Fuel											
.50 to 1.00	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1.01 to 2.00	11	15	0	11	0	11	0	9	0	0	0	0	0	0	0	0	0	2
2.01 to 3.50	119	285	0	0	119	119	0	37	0	0	49	11	8	0	14	0	0	0
3.51 to 5.00	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
5.01 to 7.50	2	10	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0
7.51 and above	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	**133**	**311**	**0**	**12**	**121**	**133**	**0**	**46**	**0**	**0**	**49**	**13**	**8**	**0**	**14**	**0**	**0**	**3**

DIESEL-ELECTRIC MARINE PROPULSION ORDERS, January - December 2020

Output Range (MW)	Number of Units	Total Engine Output for Each Output Range (MWe)	Engine operating speed ranges			Fuel		Western Europe	Eastern Europe, Russia & CIS	Middle East	Far East	Southeast Asia & Australia	Central Asia	North Africa	Central, West, East & South Africa	North America	Central America & Caribbean	South America
			300 to 600 r/pm	720 to 1000 r/pm	Above 1000 r/pm	Diesel Fuel	Heavy Fuel											
.50 to 1.00	1	0.8	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	68
1.01 to 2.00	13	17.8	13	0	13	0	11	0	0	0	0	0	0	0	0	2	0	3
2.01 to 3.50	237	605	3	234	237	0	126	28	17	24	0	0	0	14	0	21	0	9
3.51 to 5.00	1	4	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	5
5.01 to 7.50	1	6	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0
7.51 and above	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	**253**	**633.6**	**19**	**234**	**253**	**0**	**137**	**28**	**19**	**24**	**0**	**0**	**0**	**14**	**0**	**24**	**0**	**0**

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