



TÜRK LOYDU

TYPE APPROVAL CERTIFICATE

This is to certify that the

REDUCTION GEARS FOR ENGINES

Manufacturer	D-I INDUSTRIAL Co. Ltd.
Address	13, NAMGANG-RO 1367 BEON-GIL, JINJU-SI GYEONGSANGNAM-DO KOREA
Product Type	SEE APPENDIX I
Particulars / Designation	D-I INDUSTRIAL Co. Ltd
Application	These gear boxes intended for main propulsion with diesel engine
Reference Rule	TL Rules, Part A, Chapter 2, Material, January 2021 TL Rules, Part B, Chapter 4, Machinery, January 2021
Place and Date	ISTANBUL / 06.10.2022

Subject to the conditions referred to in the following pages, this certificate is valid until 04.09.2026.

Emrah SÖĞÜTÇÜ
New Building Division Manager



128485

This certificate is subject to terms and conditions described below:

- Any significant change in design or construction may render this Certificate invalid. Type Approval Certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested. This certificate is not valid for products without marking above mentioned. The manufacturer should notify TÜRK LOYDU of any modifications or changes to equipment in order to obtain valid certificate. This certificate shows that tested specimens as representative of the product complies of the TÜRK LOYDU rules, and relevant international instruments that apply to it.

Product Details:

Type Designation: See Appendix 1

Application / Limitation (Approval Conditions) :

- 1- These gear boxes intended for main propulsion system with diesel engine.
- 2- These gear boxes may be fitted on ships granted with an automation notation provided that all requirements stated in our rules are complied with.
- 3- This certificate does not cover Ice Class Notations applications.
- 4- When requirements by the rules the accessories fitted on the gear box must be type approved. Their certificate are to be presented to the Port Authorities when requested.
- 5- An elastic coupling is to be installed between the engine and the gear box.

Plan Approval Remarks: -

Documentation:

The design and construction drawings approved by Türk Loydu
TL Ref Number: PAE-EPAS/013997/21-2693/OE dated 05.10.2022

Following tests were carried out with satisfactory results.

- Visual Inspection
- Control according to approved drawings
- Measurement of reduction ratio
- Run test
- Leak test
- Check of tooth contact pattern

Product Description: See Appendix 1

Test Place : D-I INDUSTRIAL Co. Ltd. - 13, NAMGANG-RO 1367 BEON-GIL, JINJU-SI
GYEONGSANGNAM-DO KOREA

Test / Audit Date : 13.04.2022



Surveyor Name: Caner COŞKUN

This certificate is subject to terms and conditions described below:

- Any significant change in design or construction may render this Certificate invalid. Type Approval Certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested. This certificate is not valid for products without marking above mentioned. The manufacturer should notify TÜRK LOYDU of any modifications or changes to equipment in order to obtain valid certificate. This certificate shows that tested specimens as representative of the product complies of the TÜRK LOYDU rules, and relevant international instruments that apply to it.

Appendix-1

NO	TYPE	RATIO	RPM	TORQUE			POWER		
				kgf.m	kgf.m	N.m	kW	HP	PS
1	DMT190H	1.83	2500	180	180	1765	461	619	628
		2.09	2500	180	180	1765	461	619	628
		2.51	2500	180	180	1765	461	619	628
		3.08	2500	180	180	1765	461	619	628
		3.43	2500	180	180	1765	461	619	628
2	DMT190HL	4.04	2500	180	180	1765	461	619	628
		4.48	2500	180	180	1765	461	619	628
3	DMT200H	1.83	2500	200	200	1962	513	628	698
		2.09	2500	200	200	1962	513	628	698
		2.51	2500	200	200	1962	513	628	698
		3.08	2500	200	200	1962	513	628	698
		3.43	2500	200	200	1962	513	628	698
4	DMT200HL	4.04	2500	200	200	1962	513	628	698
		4.48	2500	200	200	1962	513	628	698
5	DMT240H	1.50	2500	218	218.8	2146	561	752	763
		1.97	2500	218	218.8	2146	561	752	763
		2.44	2500	218	218.8	2146	561	752	763
		2.93	2500	218	218.8	2146	561	752	763
		3.40	2500	218	218.8	2146	561	752	763
6	DMT260H	2.06	2500	258	258.6	2536	663	889	902
		2.50	2500	258	258.6	2536	663	889	902
		2.92	2500	258	258.6	2536	663	889	902
		3.26	2500	258	258.6	2536	663	889	902
7	DMT260HL	3.53	2500	258	258.6	2536	663	889	902
		4.08	2500	258	258.6	2536	663	889	902
		4.52	2500	258	258.6	2536	663	889	902
		5.04	2500	239	239.0	2344	613	822	834
8	DMT280H	2.06	2500	298	298.4	2927	765	1026	1041
		2.50	2500	298	298.4	2927	765	1026	1041
		2.92	2500	298	298.4	2927	765	1026	1041
		3.26	2500	298	298.4	2927	765	1026	1041
9	DMT280HL	3.53	2500	298	298.4	2927	765	1026	1041
		4.08	2500	298	298.4	2927	765	1026	1041
		4.52	2500	298	298.4	2927	765	1026	1041
10	DMT300HL	3.56	2300	298	298.3	2926	703	943	957
		4.13	2300	292	292.4	2868	690	926	939
		4.59	2300	286	286.5	2810	676	907	920
11	DMT400H	1.43	2300	453	453.6	4449	1070	1436	1456
		1.72	2300	453	453.6	4449	1070	1436	1456
		2.03	2300	453	453.6	4449	1070	1436	1456
		2.46	2300	397	397.3	3897	937	1257	1275
		2.75	2300	323	323.0	3168	762	1022	1037
12	DMT400HL	3.02	2300	453	453.6	4449	1070	1436	1456
		3.28	2300	453	453.6	4449	1070	1436	1456
		3.56	2300	453	453.6	4449	1070	1436	1456
		4.07	2300	453	453.6	4449	1070	1436	1456
		4.48	2300	429	429.7	4215	1014	1360	1379
13	DMT460HL	4.95	2300	381	381.0	3737	899	1206	1223
		3.02	2300	453	453.2	4445	1070	1435	1455
		3.28	2300	453	453.2	4445	1070	1435	1455
		3.56	2300	453	453.2	4445	1070	1435	1455
		4.07	2300	453	453.2	4445	1070	1435	1455
		4.48	2300	409	409.2	4014	966	1296	1314
14	DMT560HL	4.95	2300	374	374.0	3668	883	1184	1201
		3.02	2300	550	550.4	5399	1299	1742	1767
		3.28	2300	550	550.4	5399	1299	1742	1767
		3.56	2300	550	550.4	5399	1299	1742	1767
		4.07	2300	550	550.4	5399	1299	1742	1767
		4.48	2300	526	526.1	5161	1242	1665	1689
		4.95	2300	435	435.7	4274	1028	1379	1399



Surveyor Name: Caner COŞKUN

This certificate is subject to terms and conditions described below:

- Any significant change in design or construction may render this Certificate invalid. Type Approval Certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested. This certificate is not valid for products without marking above mentioned. The manufacturer should notify TÜRK LOYDU of any modifications or changes to equipment in order to obtain valid certificate. This certificate shows that tested specimens as representative of the product complies of the TÜRK LOYDU rules, and relevant international instruments that apply to it.

