DNV·GL

Certificate No:
TAM00000BN

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Reduction Gear for Gas Turbine

with type designation(s)
Centaur 40, Taurus 60 (50 Hz) P/N: 222150-102,
Centaur 40, Taurus 60 (60 Hz) P/N: 302750-201,
Taurus 70 (50 Hz) P/N: 330850-308,
Taurus 70 (60Hz) P/N: 330850-408,
Titan 130 (50Hz) P/N: 304850-1XX, 3XX, 5XX,
Titan 130 (60 Hz) P/N: 304850-2XX, 4XX,
Titan 250 (50 Hz & 60 Hz) P/N: 361000-XX

Issued to
Solar Turbines Incorporated
San Diego CA, United States

is found to comply with
DNV GL rules for classification – Ships
DNV's Offshore Standard DNV-OS-D101 "Marine and Machinery Systems and Equipment"

Application :

The reduction gears are approved for marine propulsion, generator drive and mechanical drive application.

This Certificate is valid until **2021-09-12**.

Issued at **Houston** on **2016-09-12**

for **DNV GL**

DNV GL local station: **Long Beach**

Approval Engineer: **Srujanbabu Sridharala**

Brandon D Caraway
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

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Product description

Centaur 40, Taurus 60 (50 Hz)	222150-102
Centaur 40, Taurus 60 (60 Hz)	302750-201
Taurus 70 (50 Hz)	330850-308
Taurus 70 (60Hz)	330850-408
Titan 130 (50Hz)	304850-1XX, 3XX, 5XX
Titan 130 (60 Hz)	304850-2XX, 4XX
Titan 250 (50 Hz & 60Hz)	361000-XX

Application/Limitation

Type	Input torque	Input speed
Centaur 40, Taurus 60 (50 Hz) P/N: 222150-102	**4002 Nm**	**14,944 RPM**
Centaur 40, Taurus 60 (60 Hz) P/N: 302750-201	**4143 Nm**	**14,951 RPM**
Taurus 70 (50 Hz) Solar P/N: 330850-308	**6601 Nm**	**15,143 RPM**
Taurus 70 (60Hz) P/N: 330850-408	**6595 Nm**	**15,158 RPM**
Titan 130 (50Hz) P/N: 304850-1XX, 3XX, 5XX	**16413 Nm**	**11,197 RPM**
Titan 130 (60 Hz)P/N: 304850-2XX, 4XX	**16452 Nm**	**11,170 RPM**
Titan 250 (50 Hz & 60 Hz) P/N: 361000-XX	**50336 Nm**	**6,326 RPM**

Type Approval documentation

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Tests carried out

Service experience of gearboxes to be documented.

Marking of product

The product is to be marked with manufacuter's name or trademark and type number identification.

Periodical assessment

For retention of Type Approval, DNVGL surveyor shall perform a survey report every second year and before expiry date of this certificate to verify that the conditions of the Type Approval are complied with.

END OF CERTIFICATE