Certificate No: LR2019367REP
Issue Date: 14/02/2020
Expiry Date: 13/02/2023

Certificate Of Thermal Spraying Approval

Manufacturer	**Tru-Marine Pte Ltd**
Address	35 Tuas Basin Link, Singapore, 638769, Singapore
Process	Arc Flame

This certificate is issued to the manufacturer named above who has been approved in accordance with the requirements of Lloyd's Register for thermal spraying of components using the above processes in accordance with the approved procedures listed below.

Scope of Approval	**Thermal spray coatings to marine diesel turbocharger (VTR type) components using the following processes:** **1. Powder Flame Spraying to TSPS No: PFS-TSPS01-2004 rotor shaft ends.** **2. Powder Flame Spraying to TSPS No: PFS-TSPS02-2004 rotor shafts.** **3. Arc Spraying to TSPS No. AS-TSPS01-2004 turbocharger cover rings.** **Previous Lloyd's Register Reference No: 0043.**
Application	**Thermal spray coatings to marine turbocharge (VTR) components.**

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Clive Arnold

Senior Metallurgist to Lloyd's Register EMEA
A member of the Lloyd's Register group

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This approval is subject to compliance with the requirements of Lloyd's Register. Each application is to be separately approved by Lloyd's Register and carried out to the satisfaction of the Surveyor.

Lloyd's Register will consider thermal spraying for surfacing applications to improve resistance to wear and corrosion, and to restore worn or inaccurately machined parts to original dimensions. Approval is based, however, on the condition that no dependants is placed on the coating for tensile or torsional strength and that machined preparations do not reduce dimensions below Rule requirements.

Lloyd's Register is to be notified of any change of plant, formulation or quality control routines introduced during the validity of this Certificate.

This Certificate is issued to the above company and, subject to regular audits to ensure continued implementation of the thermal spraying procedures and quality system, is valid until the date given above.

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