



# Indian Register of Shipping

CERTIFICATE NO: 2018TAC057

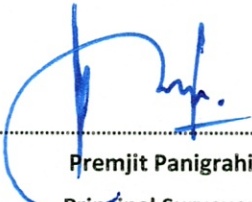
## TYPE APPROVAL CERTIFICATE

*This is to certify that the product is in accordance with the applicable rules/standards/codes as described below.  
The product is considered to be suitable for use in marine applications and is **retained** in the list of approved products.*

MANUFACTURER	Trelleborg Sealing Solutions
REGISTERED OFFICE & WORKS	Bradmarsh Business Park, S60 1BX Rotherham, United Kingdom
PRODUCT NAME	MARINE BEARINGS
MODEL NO. / TRADE NAME	ORKOT TLM MARINE
PRODUCT DESCRIPTION	Synthetic Bearing Material for use in 1. Rudder stock and pintle bearings 2. Water lubricated stern tube bearing with a length to diameter ratio of not less than 2:1
APPLICABLE RULES/STANDARDS/CODES	Rules and Regulations for the Construction and Classification of Steel Ships
CONDITIONS OF APPROVAL	See Annexure
VALIDITY	The Certificate is valid until 01/09/2023

ISSUE DATE: 20/08/2018

PLACE: MUMBAI

  
Premjit Panigrahi  
Principal Surveyor

Previous Certificate No : 2013TAC041 dated : 23/09/2013

This Certificate is issued upon the following terms and conditions as laid down in the Society's Regulations:-

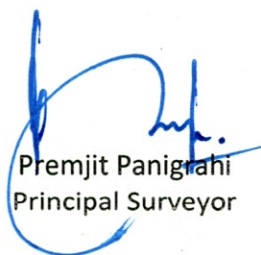
Whilst Indian Register of Shipping, a Classification Society, along with its subsidiaries and associates (hereinafter referred to as the Society) and its Board/Committees use their best endeavors to ensure that the functions of the Society are properly carried out, in providing services, information or advice neither the Society nor any of its servants or agents warrants the accuracy of any information or advice supplied. Except as set out herein neither the Society nor any of its servants or agents (on behalf of each of whom the Society has agreed this clause) shall be liable for any loss damage or expense whatever sustained by any person due to any act or omission or error of whatsoever nature and however caused of the Society, its servants or agents or due to any inaccuracy of whatsoever nature and howsoever caused in any information or advice given in any way whatsoever by or on behalf of the Society, even if held to amount to a breach of warranty. Nevertheless, if any person uses services of the Society, or relies on any information or advice given by or on behalf of the Society and suffers loss damage or expenses thereby which is proved to have been due to any negligent act omission or error of the Society, its servants or agents or any negligent inaccuracy in information or advice given by or on behalf of the Society then the Society will pay compensation to such person for his proved loss up to but not exceeding the amount of the fee charged by the Society for that particular service, information or advice.

Any notice of claim for loss, damage or expense, as referred to above, shall be made in writing to the Society's Head Office within six months of the date when the service, information or advice was first provided, failing which all the rights to any such claim shall be forfeited and the Society shall be relieved and discharged from all liabilities.

ANNEXURE  
TO CERT. NO. 2018TAC057 DATED 20<sup>TH</sup> AUGUST 2018  
TERMS AND CONDITIONS

This approval is subject to following:

- 1) The properties of the materials used shall comply with the values as specified in Orkot "TLM Marine" Engineering manual and the product information brochure forming the basis of approval. Any changes there to shall be intimated to this society.
- 2) The installation of the bearings should be in accordance with the manufacturer's instructions, Rules of the society and to the satisfaction of the Society's surveyor.
- 3) The nominal bearing pressure is not to exceed the following:
  - a) for stern tube bearing - 0.55 N/mm<sup>2</sup>
  - b) for rudder stock and pintle bearing - 5.5 N/mm<sup>2</sup> (Steel against synthetic material with no lubrication)
  - c) for rudder stock and pintle bearing - 10 N/mm<sup>2</sup> (Steel against synthetic material with water or grease/oil lubrication)
- 4) Satisfactory in-service performance of the bearing.

  
Premjit Panigrahi  
Principal Surveyor