



**CERTIFICATE OF APPROVAL OF MANUFACTURERS OF  
MATERIALS  
No. 2019 XI 01 236**

**This is to certify** that the manufacture of the product identified below is in compliance with the applicable requirements of the RINA Rules for the Approval of Manufacturers of Materials.

<i>Description</i>	<b>Seamless steel tubes and pipes in austenitic and austenitic-ferritic (duplex) stainless steel and super duplex stainless steel</b>
<i>Type</i>	<b>Grades 304, 304L, 316, 316L, 321, 321H, 347, 347H, 316 Ti, UNS S31803/ S32205, UNS S31500 &amp; UNS S32750</b>
<i>Applicant</i>	<b>TUBACEX PRAKASH INDIA PRIVATE LIMITED SURVEY NO.131/1, UMBERGAON-SANJAN ROAD, VALSAD DIST.,GUJARAT 396171</b>
<i>Manufacturer</i>	<b>TUBACEX PRAKASH INDIA PRIVATE LIMITED</b>
<i>Reference standards</i>	<b>RINA Rules for the approval of manufacturers of materials</b>

*Issued in* **RINA India Marine** on **July 15, 2019**. *This Certificate is valid until* **July 8, 2024**

**RINA Services S.p.A.**



**Prasad P. M.  
Marine Surveyor  
RINA India  
26663**

This certificate consists of this page and 1 enclosure



**2019 XI 01 236**

**Grades 304, 304L, 316, 316L, 321, 321H, 347, 347H, 316Ti, UNS S31803/ S32205, UNS S31500, UNS S32750**

**APPROVAL CONDITIONS**

**Size range**

**Outside diameter: 6 mm to 219.10 mm Wall Thickness: 1.0 mm to 12.70 mm**

**Manufacturing process: Hollow pipes made by Hot Piercing from round bars and cold finish pipes & tubes by Cold drawing/Cold Pilgering.**

**Heat treatment:**

Solution Annealing to minimum temperatures as below for various grades and quenching by cooling rapidly with water or Air

**Grades**

**304, 304 L, 316, 316 L, 321, 321H, 347, 347H & 316Ti  
UNS S31803/S32205, UNS S31500 & UNS S32750**

**Minimum Temperature**

**1040 deg. C**

**1100 deg. C**

**Survey conditions:**

The Seamless pipes & tubes are to be in compliance in all respects with the requirements specified in Part D Ch 2 Sec2 of the RINA Rules and are to be tested accordingly.