



## Qualification Test Record (QTR) NORSOK M-650

QTR.  
No.:UAPL/QTR/01

Rev. No.:01

**Manufacturer name/address/Web page:**

M/s.Ultimate Alloys Private Limited,  
Trichy Road, Sulur,Coimbatore- 641 402, Tamil Nadu.  
E-Mail: ultimate@ultimatealloys.com  
Web: www.ultimatealloys.com

**Reference standard**

NORSOK M-650, Edition 4,september 2011

**Material designation and MDS No.:**

ASTM A995 Gr. 5A (UNS J93404)Norsok M-630 Edition 6, october 2013 MDS D56, Rev. 5,

**Manufacturing Summary doc. No.:**

Manufacturing summary for 5A (UNS J93404) sand casting Doc.No : UA/MS/M650/02/5A Dated 20.02.2019 Rev. No.:01

**Products and manufacturing process(es):**

Products: Ferritic/Austenitic Stainless Steel castingsType 25Cr duplex ASTM A995 Gr.5A (UNS J93404) Production route No. UA/MS/M650/02/5A Rev.01 (Hand Mould Sand Castings.)

**Mandatory conditions and sub-contractors:**

- AOD refined raw material(Blooms/Billets/Plates)from steel manufacturer Garodia Mumbai is certified for IATF 16949 and no Foundry Returns allowed.
- Material testing is carried out at ISO/IEC 17025 accredited test house as belowMicro Lab Coimbatore Tamil Nadu or other approved laboratory.
- Heat treatment, Repair Welding done In-house
- RT and Machining from Approved Sub-Contractor
- Tests according to MDS requirements were performed at ISO 17025 Accredited Laboratory
- Change of any Essential Variables according to Norsok M-650 Ed. 4 requires Requalification.
- Heat treatment carried out Qualified Furnace No.HTF:06 only
- Melting Process : Induction with certified AOD Blooms/billets or/plates
- All weld repair required PWHT

**Other information:**

Acid Pickling and Passivation done In-house

**Qualification expires:**

07.02.2025

### Tested and qualified thickness and weight

Products and manufacturing process(es):	Test record No.	Tested thickness mm	Qualified thickness mm	Test piece weight kg	Qualified weight kg
Hand Mould Sand Castings	UA/M650/MTC-01	150	150	543	All

### Qualification/acceptance signatures

**Manufacturer:**

M/s.Ultimate Alloys Private Limited,  
Trichy Road, Sulur,  
Coimbatore- 641 402, Tamil Nadu.  
Web: www.ultimatealloys.com

**Prepared by/Date:** 07/02/2020

**S.DAMODARAN**  
QC-Incharge

**Checked by/Date:** 07/02/2020

**P.SENTHILKUMAR**  
(QA Incharge)

The manufacturer and this QTR are evaluated and found to be in compliance with the requirements of NORSOK M-650 Ed. 4 for supply of the above listed products and materials.  
*This acceptance does not exempt any purchaser from his responsibility to ensure that this qualification is valid for his products within the essential variables of NORSOK M-650 Ed. 4.*

**Qualified/Accepted by(company name /address)**

**John Butterworth(Principal Metallurgist)**  
**Sulzer Pumps(UK) Ltd**  
**Manor Mill Lane**  
**Leeds LS11 8BR**

**Signature/Date:**

*R John Butterworth*  
*7th February 2020*

