



**QTR**  
**Qualification Test Record**  
**NORSOK M-650**

QTR. No.:  
 GG-N-QTR-1400  
 Rev. No.: A

<b>Manufacturer Name/address/ Web page:</b>	Gustav Grimm Edelstahlwerk GmbH & Co. KG Ronsdorfer Str. 172-174 D - 42855 Remscheid www.gustav-grimm.de
<b>Reference standard</b>	NORSOK M-650 Edition 4 - September 2011
<b>Material designation and MDS No.:</b>	ASTM A 182, UNS S31803 / F51, MDS D44 Rev. 5 ASTM A 182, UNS S32205 / F60, MDS D44 Rev. 5
<b>Manufacturing summary doc. No.:</b>	GG-N-MS-1410 - Discs - 1.4462 (Type 22Cr Duplex) <span style="float:right">Rev. No.: B</span>
<b>Products and manufacturing process(es):</b>	<b>Discs</b> Production route: Forging by press
<b>Mandatory conditions and sub-contractors:</b>	Heat treatment furnace No. 6 Heat treatment according to GG-N-DHTF-0000 and GG-N-HTI-1000 Rev. No.: B <b>Start material:</b> Silbitz Guss GmbH <b>Metallographic examination and corrosion testing:</b> Germanischer Lloyd Prüflabor GmbH, Herne
<b>Verification of heat treatment procedure</b>	GG-N-HTV-0002-TR01 Rev. No.: B Date: 15. June 2015 Temperature: 1120°C
<b>Other information:</b>	<u>Delivery conditions:</u> ➤ semi-finished products pre-machined ➤ no-finished surfaces
<b>Qualification expires:</b>	<b>March 2021</b>

**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)
Discs	GG-N-QTR-1400	1000 x 250 mm	1000 x 250 mm	app. 1550 kg	all

**Qualification/Acceptance signatures**

<b>Manufacturer:</b>	<b>Prepared by/Date:</b> Karsten Voigt 09.03.2016 <i>Karsten Voigt</i>	<b>Checked by/Date:</b> Roland Winter 09.03.2016 <i>R. Winter</i>
<p align="center">The manufacturer and this QTR are evaluated and found to be in compliance with the requirements of NORSOK M-650 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.</p>		
<b>Qualified/Accepted by</b> (company name/address):  Aker Engineering & Technology AS Reg.nr. 879 817 552	<b>Signature/Date:</b> Erling Rygegen 09/03/2016 <i>Erling Rygegen</i>	