

CUSTOMER : SIN GHEE HUAT CORPORATION LTD

SUPPLIER : HYO SUNG CORP.

PURCHASE ORDER NO. : 5028430

REF. CD: 5028430

posco

SPECIALTY STEEL

147 Jeokhyeon-ro, Seongsan, Changwon, Gyeongnam, Korea

INSPECTION-CERTIFICATE

CERT. NO. : 30625-2196

MANUFACTURE NO. : KROAD20BA2150

STEEL GRADE : 410

SIZE : DIAMETER 165.1 MM

ARTICLE : ROUND BARS

SPECIFICATION : ASTM A276

EDITION/ADDENDA : 06

STATE OF DELIVERY : FULL ANNEALING

ROUGH TURNED

MELTING PROCESS : E.A.F.

V.O.D.

INGOT CASTING

| Lot No. | | Chemical Composition(wt.%) | | | | | | | | | | Non-Metallic Inclusion Test | | | | | | | |
|-----------------------|------|----------------------------|-------|--------------|-------|------------------|-------------|--------------------|-------------|--|----------------------------|-----------------------------|----------------------|-----------------------|--|--|--|--|--|
| | | C | SI | MN | P | S | NI | CR | MO | CU | | | | | | | | | |
| Spec. | MIN. | .080 | | | | | | 11.500 | | | | | | | | | | | |
| | MAX. | .150 | 1.000 | 1.000 | .0400 | .0300 | | 13.500 | | | | | | | | | | | |
| N02436 | | .126 | .363 | .590 | .0266 | .0035 | .310 | 11.838 | .073 | .111 | | | | | | | | | |
| Test No. (Lot No.) | | Tensile Properties | | | | | Hardness | | Impact Test | | Decarburized Depth (mm) | | Grain Size No. | Additional Tests | | | | | |
| | | Y.S.(KSI) | | T.S (KSI) | | EL. (%) | R.A. (%) | Body HB | | | | | | Ultrasonic test: GOOD | | | | | |
| | | 0.2% | | | | | | | | | TOTAL | | FERR. | | | | | | |
| Spec. | MIN. | 40.0 | | 70.0 | | 20.0 | 45.0 | | | | | | | | | | | | |
| | MAX. | | | | | | | | | | | | | | | | | | |
| 0000-1 | | 44.0 | | 85.0 | | 33.0 | 73.0 | 162 | | | | | | | | | | | |
| Lot No. | | Bundle No. | | Length (mm) | | Number of Qt. | | Weight Kg lb | | Additional Tests / Remarks | | | | | | | | | |
| 3019520000 | | 30195200001 | | 4270 - 4300 | | 2 | | 1,426 3,144 | | <p>EN 10204 Type 3.1 / NO REPAIR WELDING. FREE FROM MERCURY CONTAMINATION.</p> <p>CERTIFY TO ASTM A276/A479, ASME SA276/SA479</p> <p>INSPECTION CERTIFICATE EN10204 3.1</p> <p>HARDNESS ACCORDING TO NACE MR0175 & NACE MR0103</p> <p>MELTING & MANUFACTURING FROM SOUTH KOREA</p> <p>CONDITION : ANNEALED</p> <p>FREE FROM MERCURY CONTAMINATION</p> <p>THE QUALITY MANAGEMENT SYSTEM IS CERTIFIED ACC. PRESSURE EQUIPMENT DIRECTIVE [97/23/EC]</p> <p>ANNEX 1,S.,4.3 BY TUEV AND LLOYD'S</p> | | | | | | | | | |
| | | | | TOTAL | | 2 | | 1,426 3,144 | | <p>We here certify, that the material described above has been tested and complies with the terms of the order contract.</p> <p>Our quality system is certified in accordance with ISO 9001: 2008 by DNV.</p> | | | | | | | | | |

CERTIFIED TRUE COPY

SIN GHEE HUAT CORPORATION LTD.

General manager, Quality Technology Department

DATE : JUN. 28, 2013