

96952

CO45826

PJSC DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE

Contract No.: 50005
 TECHN. PROTOCOL № 210-11 SPEC. №4095/P025089-ED
 ASTM A182/A182M-10; ASME SA-182/SA-182M-10; ASTM A276-10; ASTM A314-08; ASTM A179/A179M-10; ASME SA-479/SA-479M-10; ASTM A484/A484M-10; AMS-QQ-S-763B-06 Cond. A; AMS 5648K-07; AMS 5653F-07; ASTM A193/A193M-10 GR B8M/CL1; ASME SA-193/SA-193M-10GR B8M/CL1; ASTM A320/A320M-08GR B8M/CL1; ASME SA-320/SA-320M-10 GR B8M/CL1; NACE MR 0175-03; NACE MR 0103-10

Sheets: 7
 Sheet: 7
 QUALITY CERTIFICATE EN102043.1 Nr.253305
 PLANT ORDER № 8014904095

CUSTOMER
 DSS INTERNATIONAL SA
 Switzerland

PRODUCT DESCRIPTION
 Bars and rods of corrosion-resistant (stainless) steel forged, peeled, pickled, and annealed.
 коррозійностійкі (нержавіючі) сталі ковані, оброблені, окислені та наведено в розп'ятому стані.

STEEL MAKING PROCESS: EAF/AOD
СНОВОБ ВПЛАВКЕ: Днепродзержинський АЛП
 Round 18.750in/476.25 mm L=4,400in/7,869 ft
 Grade: 316/F316/316L/F316L.

QUANTITY:
 (number of pcs) 1bund Q-7716 lb/3500 kg

Delivery condition
 solution annealed :1900-2010°F (1040-1100°C) water 33 min/ytes
 термоміцна обробка в розп'ятому стані

ANALYSIS, %	C	Si	Mn	P	S	Cr	Ni	Mo	Al	Cu	V	W	Ti	Co	Nb	N ₂
REQUIRED	<.030	<1.00	1.25-2.00	<.040	.020-.030	16.00-18.00	10.00-14.00	2.00-3.00	10	<.40	<.10	<.20	<.15	<.40	<.20	<.10
CAST № 96952	.023	.30	1.33	.032	.024	16,70	10,23	2,11	.058	.21	.05	.17	.070	.07	.01	.0270

ASTM A370-08a

MECHANICAL PROPERTIES	Yield Strength, ksi(N/mm ²) Re (R _{e2})	Tensile Strength, Rm,ksi (N/mm ²)	Elongation A ₅ %	Reduction of area, Z %	Brinell Hardness HB	Impact strength, KV, J
REQUIRED	36(248)	75 (515)	45	50	140-223	100
EFFECTIVE	34.6(238)	75.3(517)	63	80	152	212

TECHNICAL REQUIREMENTS:
 Macrostructure - GOOD
 GRAIN SIZE: 5 to ASTM E 112-96(2004)
 Nonmetallic inclusions ASTM E 45-05 (Method A)
 A thin thick thin thick thin thick
 B 3.0 2.0 2.0 1.5 0.0 0.0 1.0 1.0
 C 3.0 2.0 2.0 1.5 0.0 0.0 1.0 1.0
 D ICC-ASTM A262-08 (practice E)-test: O.K.
 Dimension/surface defects test, anti-mixing test -- OK

Mechanical properties tested in state of delivery

US - testing yes Results: SEP 1921, group 3/class Cc - O.K.

Radiation free; mercury free. No Weld or Weld repair.

Manufacturer: PJSC DNIPROSPETSSTAL
 Date: 03.10.11 Manager of quality assurance
 department - V. Kapaieva Signed:

Zaporozhye
 Made in Ukraine.