



Mill Test Certificate

Certificate No. : 141120-FP01PS-00016-0001

Date of Issue : Dec., 03, 2014

Order No. : 01S1303983

PO No. : 244429

Supplier : DAE WOO INTERNATIONAL CORP.

Commodity : PLATE

Customer : NAMASCO LA CORP.

Spec & Type : A36/SA36/A709-36

Size	Product No.	Quantity	Weight (kg)	Heat No.	Position	Tensile Test			Division	Chemical Composition (%)											
						YP (MPa)	TS	EL (%)		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	Nb	V	
2.25"x120"x240"	PB63209501-9502	2	16,670	SB19658	T	285	462	35	L	0.1423	0.242	1.080	0.0140	0.0016	0.020	0.009	0.009	0.005	0.004	0.001	
*** Sub Total (110) ***		2	16,670 (kg)						P	0.1566	0.239	1.048	0.0138	0.0013	0.019	0.009	0.009	0.005	0.002	0.001	
2.5"x120"x240"	PB63253501-3502	2	18,524	SB19658	T	284	457	34	L	0.1423	0.242	1.080	0.0140	0.0016	0.020	0.009	0.009	0.005	0.004	0.001	
*** Sub Total (120) ***		2	18,524 (kg)						P	0.1566	0.239	1.048	0.0138	0.0013	0.019	0.009	0.009	0.005	0.002	0.001	
2.75"x120"x240"	PB63253401-3402	2	20,374	SB19658	T	282	453	33	L	0.1423	0.242	1.080	0.0140	0.0016	0.020	0.009	0.009	0.005	0.004	0.001	
*** Sub Total (130) ***		2	20,374 (kg)						P	0.1566	0.239	1.048	0.0138	0.0013	0.019	0.009	0.009	0.005	0.002	0.001	
*** Grade Total ***		6	55,568 (kg)																		
*** Grand Total ***		6	55,568 (kg)																		
=== Last Item ===																					

* Position - T : Top, M : Middle, B : Bottom
 * Tensile Test. Direction : Transversal, Gauge Length : 200mm(Rectangular), YP Method : 0.2% off-set
 * Division - L : Ladle Analysis, P : Products Analysis
 * Supply Condition : As-Rolled unless otherwise Heat Treated.

We hereby certify that the material herein has been made in accordance with the order and above specification. This material has been made by vacuum degassing process. This material is fine grained steel. This material has been fully killed and made by basic oxygen process. Test Certificate is issued according to EN10204 3.1.

This Mill Test Certificate cannot be copied for any purpose.

Surveyor To :

M. S. JANG



Metallurgical Chemistry and Testing Laboratory

3204 BROADWAY (77017)
POST OFFICE BOX 282265
HOUSTON, TEXAS 77207-2265
PHONE: (713) 644-7501
FAX: (713) 644-1400
www.an-tech.com

February 19, 2015

Page 1 of 1

North Shore Supply Company
Attn: Junion Johnston
P.O. Box 9940
Houston, TX 77213-0940

P.O. No. 255331
Report No. 15-0321

IDENTIFICATION: 2-3/4" x 6" x 8", Tag # 020315-20, HT# SB19658, SL# PB632534-01
MATERIAL: A36
REFERENCE: S/O 1167634

IMPACT TEST

10mm x 10mm CVN @ +10°F
(Longitudinal)

<u>Foot Pounds</u>	<u>Lateral Expansion (mils)</u>	<u>% Shear</u>
156.0	82	80
147.0	94	70
210.0	84	100

Donald Derrick
Mechanical Testing Supervisor

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Tests were performed in accordance with the An-Tech Laboratories, Inc. Quality Assurance Manual, 2nd Edition, Revision 2 dated May 28, 2013. The contents for this report are correct and accurate and that all test results and operations performed by An-Tech are in accordance with the material specification and customer requirements. Our letters and reports are for the exclusive use of the client to whom they are addressed. Our reports apply only to the actual sample tested and are not necessarily indicative of the properties of other identical or similar materials.



Metallurgical Chemistry and Testing Laboratory

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May 14, 2015

Page 1 of 1

North Shore Supply Company
Attn: Junior Johnston
P.O. Box 9940
Houston, TX 77213-0940

P.O. No. 259222
Report No. 15-0983

IDENTIFICATION: 2.75" x 6" x 8", Tag# 020315-20A, HT# SB19658, SL# PB632534-01
MATERIAL: A 36

TRANSVERSE TENSILE TEST

.505 Dia. Tensile Test
(0.2% Offset)

<u>Dia.</u>	<u>Y. S. psi</u>	<u>T. S. psi</u>	<u>%El in 2"</u>	<u>%R.A.</u>
.502	37,900	65,400	35.70	69.6

IMPACT TEST

10mm x 10mm CVN @ +10°F
(Longitudinal)

<u>Foot Pounds</u>	<u>Lateral Expansion (mils)</u>	<u>% Shear</u>
84.0	74	40
220.0	74	100
231.0	74	100

CHEMICAL ANALYSIS

<u>Carbon</u>	<u>Sulfur</u>	<u>Manganese</u>	<u>Phosphorus</u>	<u>Silicon</u>	<u>Chromium</u>	<u>Molybdenum</u>	
.149	.002	1.06	.012	.25	.02	.001	
<u>Nickel</u>	<u>Copper</u>	<u>Vanadium</u>	<u>Columbium</u>	<u>Titanium</u>	<u>Aluminum</u>	<u>Tin</u>	<u>Boron</u>
.01	.007	.001	.001	.004	.032	.001	.0000
		<u>Calcium</u>	<u>Iron</u>				
		.0002	Balance				

WITNESSED BY: Tiago Gonçalves, ABS, May 14, 2015



Ray Smoko
Chemist
Sc

Donald Derrick
Mechanical Testing Supervisor

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