



SPAN FORGING PVT. LTD.

Mobile : 9999986702

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Mfrs. of : Steel Forgings, CNC Turned Components, Centrifugal Casting of alloy steel

Works : Village Tatarpur (Near Prithla) Teh. & Distt. Palwal

E-mail : spanforging@rediffmail.com

TEST REPORT

Ref. No.

Date

Issued to: M/s X-CELL India
Subhadra Estate, Sec-58
Samaipur Road, Ballabgarh

Report No.

845

D.O.T.

27/9/2011

D.O.R

Sample Description

DIA 40MM

Sample No.

6701

Heat No.

C33M-3

PART NAME

RESULTS

Chemical Analysis
By Spectrometer

Sample ID

J.O No.

Element	%
Carbon	0.0176
Silicon	0.129
Sulphur	0.0019
Phosphorus	0.0145
Manganese	0.373
Nickel	43.99
Chromium	22.25
Molybdenum	3.49
Vanadium	0.0356
Copper	1.69
Tungsten	0
Cobalt	0.256
Aluminium	0.133
Titanium	1.16
Iron	26.27

Checked By

Autorised Signatory

(Q.M / T.M)

For Span Forging Pvt. Ltd.

Director

1. The result listed refer only to the tested samples and applicable parameters. Endorsement of product is neither inferred nor implied.
2. Total Liability of our Laboratory is limited to the invoiced amount. No liability will be accepted after the sample is taken back.
3. The report can not be used as an evidence in a court of law.
4. Samples will be destroyed after 15 days.
5. Any Complaints about this report should be communicated with in 7 days of issue of this report.
6. This report shall not be reproduced except in full, without the written permission of the Laboratory.
7. *Not Covered under NABL Scope.

CERTIFICATE OF CONFORMITY

Customer		Consignee		Customer order number 2175		Allvac Order number 252192-0003																		
				Specification ASTM B425 2010 UNS NO.8825 ASTM B564 2010 UNS NO.8825 NACE MR0175-2003		Process Vacuum Induction Melted / Electroslag Remelted.																		
Description of material supplied: 16 Bar 40mm Diameter. Tolerance: K12 Length: 4360mm Weight: 705 kg Annealed, Peeled.																								
Cast no	C	Si	Mn	P	S	Cr	Mo	Ni	Al	B	Co	Cu	Nb	V	W	Ti	Zr	Ca	Mg	Se	Ta	Fe	Nb+Ta	
C33M-3 Top	.012	.30	.48	.002	.0001	22.17	3.09	38.14	.10			1.73				.89						31.60		
Test No	Tensile Size	R _{p0.2%}	Rm	A	Z	Impact M/R	Hardness Test piece On Bars		Notch tensile		Creep / rupture tests		D=Discontinued F=Fractured											
AC2666	inch	Ksi	Ksi	4D%	%	Charpy 2Mv	HBW10/3000	HB10/3000								KSI	°C	Hours						
T-transverse																								
L-longitudinal																								
L(1)	.500 mm	45 MPa	93 MPa	54 5D%	71		170																	
L(2)	10	312	638	52	72		170																	

Hot Working Method : Rolled, Annealed, Peeled
Heat Treatment Chart/Ultrasonic Report - Attached.
MECH TEST PERFORMED FROM BAR PROLONGATION

Heat Treatment on Bars:
Anneal 980°C for 1H / Water Quenched.
(Contact Thermocouple)
Heat Treatment Batch Number: 252192/0003
Furnace Calibration per API6A Annex P

Metallographic:
Macro Etch/Canada Etch
Satisfactory to ASTM A604 Class 1 - 4 = A at top & bottom positions.
Grain Size: E = ASTM 5.0, MR = ASTM 6.5, C = ASTM 6.0

Non Destructive Tests:
Ultrasonic: Satisfactory
The material has been furnished in accordance with the requirement.
Antimixing testing performed : OK

Certified that, unless stated above, the whole of the above-mentioned materials have been manufactured, tested and inspected in accordance with the terms of the contract/order applicable thereto and conform fully to the standards/specifications quoted hereon. The quality control arrangements adopted in respect of these supplies have accorded with the following conditions:-

Signed *R. Fairhead* Dated
FOR AND ON BEHALF OF ALLVAC Ltd.

R. Fairhead (Mr)
7 June, 2011