

Material	Dia.	Bundles	Bars	Avg. Length	Total Wt. (lbs.)	Mill	Ht#
8617H	3.50"rd.	6	80	174"	13,920	Timken	99043

Steel Certificate of Test

1835 DUEBER AVE. S.W.
CANTON, OHIO 44706

ID #0223770-1

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TIMKEN

Where You Turn

03/10/2009

S Specialty Ring Products Incorporated/Timken
O T 2374 STATE ROAD
L O
D CORNWELLS HEIGHTS PA 19020 USA

S Specialty Ring Products Incorporated
H T 2374 STATE ROAD
I O
P CORNWELLS HEIGHTS PA 19020-0807 USA

Customer Order: 05086 Customer Part Number:
Timken Order: 79426-A (1570921) Heat Number(s): 99043

Description of Material

DIAMETER: 3.500 in (88.900 mm)
Shape: RD
Sales Type: 8617H
Int Quality: STRAND CAST PRACTICE-STRAND CAST
Condition: HOT ROLL - FORGING QUALITY

Specification

- SPECIALTY RING PROD SRP-MS-001 1/6/1997
- THE TIMKEN COMPANY (TORRINGTON) T-628 Rev. 0 6/1/2004 EXCEPT CU LIMITS AND BSP MATERIAL
- THE TIMKEN COMPANY (TORRINGTON) M-174 Rev. 5 2/26/1991 ANN FOR CSQ
- ASTM A 29 / A 29M Rev. 05
- ASTM A 304 Rev. 05e2
- ASTM A 534 Rev. 04 EXCEPT DECARB
- TIMKEN 3.1.20 10/12/2006

Chemistry Information

	%C	%Mn	%P	%S	%Si	%Cr	%Ni	%Mo	%Cu	%Al	%As	%O	%Sb	%Sn
SPEC Ladle Min:	.14	.60			.15	.35	.35	.15		.012				
SPEC Ladle Max:	.20	.95	.025	.025	.35	.65	.75	.25	.30	.050	.0200	.0020	.015	.020
99043 Ladle:	.17	.83	.005	.024	.27	.48	.47	.15	.22	.026	.0050	.0010	.001	.009
	%Ti													
SPEC Ladle Min:														
SPEC Ladle Max:	.005													
99043 Ladle:	.002													

Metallurgy Information

SPEC: Chemistry DI Caterpillar 1.26 Min 1.65 Max

When shipping document is attached it becomes part of this certification.

We certify the above materials have been inspected and tested in accordance with the methods prescribed in the governing specifications and consistent with our Standard Commercial Terms and Conditions for Sale, Manufacture, and Shipping, which are incorporated into and made part of this certification. The results of such inspections and tests conform with the applicable requirements including the purchase order, specification(s) and exception(s). This certificate or report shall not be reproduced except in full, without the written approval of the Timken Corporation.

Approved: _____
NOTARY PUBLIC

by


Essie Dillard, CERTIFICATION PROCESSOR

THE TIMKEN CORPORATION

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Metallurgy Information (cont.)

Heat 99043 DI Caterpillar: 1.55

SPEC: Jominy English SAMPLE TYPE CALCULATED CAT 8617H

Location:	1	2	3	4	5	6	7	8	9	10	12	14	16	18	20	24	28	32	36	40
SPEC Min:	39	33	27	24	20															
SPEC Max:	46	44	41	38	34	31	28	27	26	25	23	22	21	21	20					

99043 DI: 42 40 36 28 23 20 19 18 18 17 15 15 14 13 13 12 11 11

SPEC: NonMet JK A THIN 2.5 Max A HEAVY 1.5 Max B THIN 2 Max B HEAVY 1 Max C THIN 0.5 Max
C HEAVY 0.5 Max D THIN 1 Max D HEAVY 1 Max

Heat	Loc	Thin	Heavy	Thin	Heavy	Thin	Heavy	Thin	Heavy
		A	A	B	B	C	C	Dox	Dox
99043	AAVERAGE	2.1	0.8	0.0	0.0	0.0	0.0	0.5	0.3
	B1C1	2.5	1.0	0.0	0.0	0.0	0.0	0.5	0.5
	B3C1	2.0	1.0	0.0	0.0	0.0	0.0	0.5	0.0
	T1C3	2.0	0.5	0.0	0.0	0.0	0.0	0.5	0.5
	T3C3	2.0	0.5	0.0	0.0	0.0	0.0	0.5	0.0
	T3C6	2.0	1.0	0.0	0.0	0.0	0.0	0.5	0.5
	T4C6	2.0	0.5	0.0	0.0	0.0	0.0	0.5	0.5

Heat 99043 Melt Source: USA
Manufacturing: USA

Macroetch equal to or better than S2 R2 C2