

F

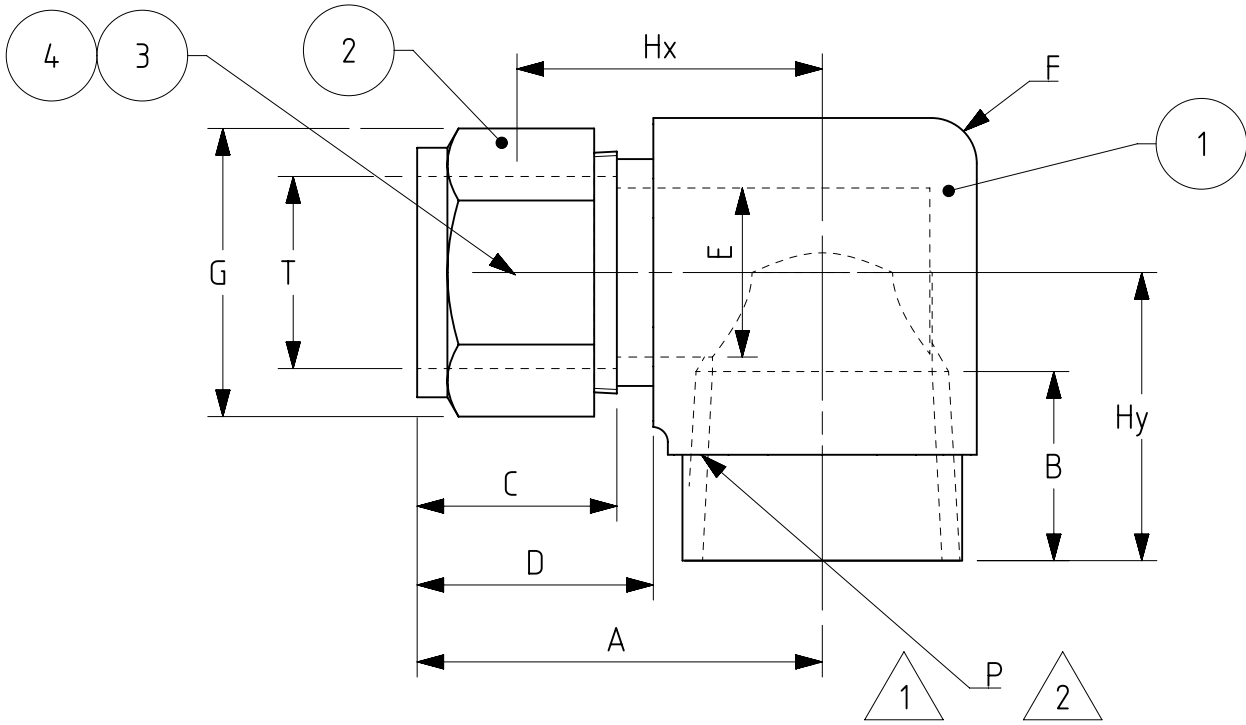
E

D

C

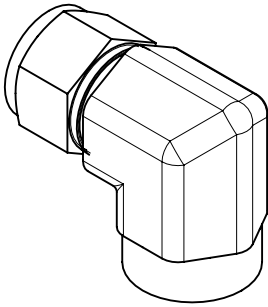
B

A



NOTES:-

1. REMOVE ALL BURRS AND SHARP EDGES.
2. BODY AND BACKNUT SHOULD BE ZINC PLATED (10μ)/PASSIVATED.
3. ALL DIMENSIONS ARE mm EXCEPT OTHERWISE STATED.
4. GENERAL TOLERANCE ON DIMENSIONS:(a)BELOW 1":^{+0.02}₋₀"(b)ABOVE 1":^{+0.04}₋₀" EXCEPT 'T','P'
5. DIMENSIONS A,C,D ARE TYPICAL FINGER-TIGHT.
6. ISO 7/1 & ISO 228/1 ARE FOR TAPER AND PARALLEL THREADS RESPECTIVELY.
7. ELBOWS ARE TO BE MACHINED FROM FORGED BLANK AND NOT TO BE CAST.
8. THIS FITTING IS TO BE SWAGED ON S.S.TUBES(Gr.304) OF HARDNESS 90 HRB MAX.
9. ALL THE PARTS OF THE FITTINGS SHOULD BE CONCENTRIC AND BE CAPABLE OF SELF-ALIGNMENT WHEN ASSEMBLED WITH PROPER SIZE TUBINGS.
- 10.NUTS & FERRULES OF PARTICULAR SIZE SHALL BE INTERCHANGEABLE FOR EACH TYPE.



F

E

D

C

B

A

SL. NO.	'T' TUBE O.D.	'P' PARALLEL THD.(FEMALE) TO ISO 228/1	A	B	C	D	'E' MINIMUM OPENING	'F' WRENCH PAD	'G' HEX. FLAT	Hx	Hy
1.	1"	1" PARALLEL (FEMALE)	2.11"	1.00"	1.04"	1.23"	0.88"	1.11/16"	1.1/2"	1.63"	1.50"

USED FOR LOCO WAG-9

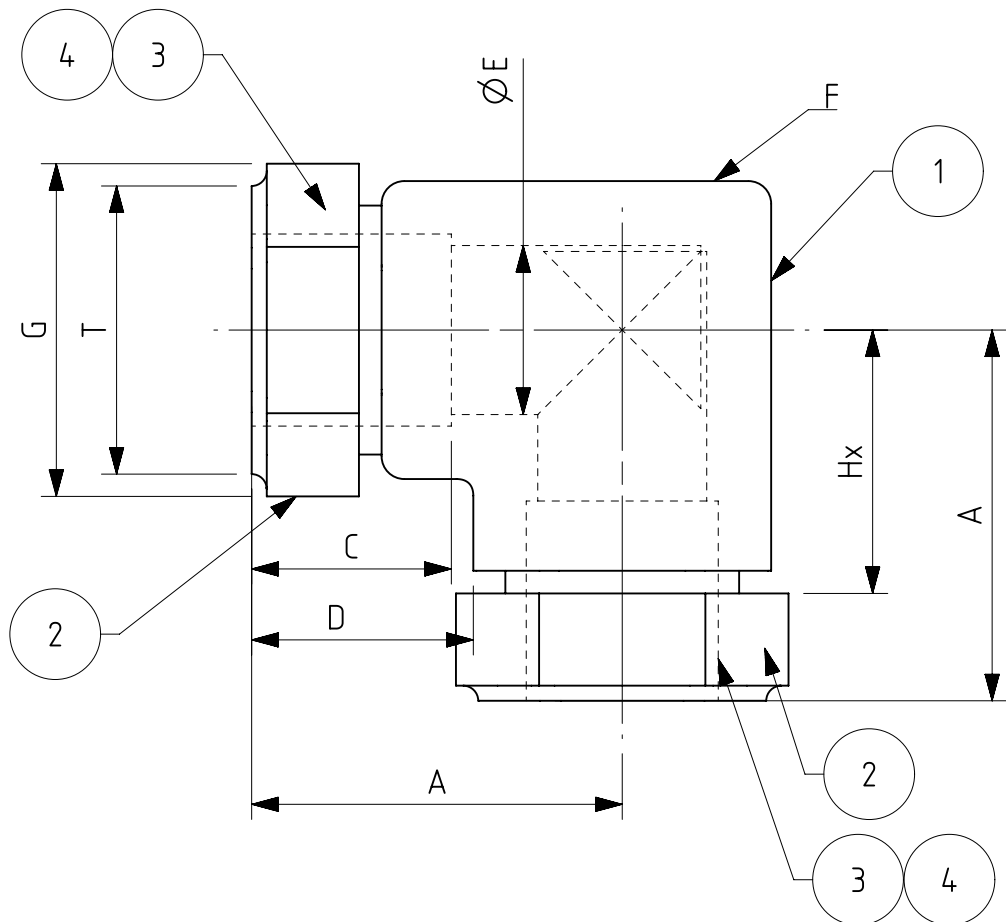
ORIGINAL SUPPLIER - SWAGELOK/USA

4			BACK FERRULE	1	STAINLESS STEEL	GR. 316	
3			FRONT FERRULE	1	STAINLESS STEEL	GR. 316	
2			BACK-NUT	1	CARBON STEEL	ASTM A 108	
1			BODY	1	CARBON STEEL	ASTM A 108	
निर्देश संख्या	लागत एवं वितरण संख्या	अंग आरेखण संख्या	वर्णन	मात्रा	पदार्थ	विशिष्टि	प्रति भार कि. ग्रा.
REF. NO.	C&D NO.	PART DRG. NO.	DESCRIPTION	QTY.	MATL	SPECN	WT. EACH IN K.G.

अधिकृतित DGN		चितरंजन रेलइंजन कारखाना CHITTARANJAN LOCOMOTIVE WORKS, INDIA					
जॉचा व.अ.अ. CHD SSE	Aloke Kumar Chakrabarty 1220457-405307	पदार्थ MATL	प्रति भार कि. ग्रा. WT. EACH IN KG				
समीक्षित स.वि.अ. / व.वि.अ. REVIEWED AEE / SEE	SATYENDR A KUMAR MAURYA 1220457-405307	विशिष्टि SPECN					
अनुमोदित च.यु.वि.अ. APPROVED DYCEE	AMIT AGGARWAL 1220457-405307	वर्णन	1" TUBE x 1" BSP FEMALE ELBOW				
दिनांक DATE	16-07-2024	DESCRIPTION					
रैखिक अनुपात SCALE	1:1	आरेखण संख्या	1209-18.306-024				
		DRAWING NO.					
संदर्भ / REF. 182-00537	ALT-	परिवर्तन संख्या ALTERATION NO.	4	पुर्ण SHEET	1 OF 1	A3	

धातु-वेल्डन चिन्ह भा. मा. : 813 / अ. मा. सं. :2553 WELDING SYMBOLS TO IS:813 / ISO:2553	अनिर्दिष्ट सद्य - सीमा मा. मा. : 2102 / अ. मा. सं. : 2768 UNSPECIFIED TOL. CLS. TO IS : 2102 / ISO : 2768												TOL. CLS.
	पदांक GRADE NO.	स1 N1	स2 N2	स3 N3	स4 N4	स5 N5	स6 N6	स7 N7	स8 N8	स9 N9	स10 N10	स11 N11	स12 N12
	Rz	0.16-0.3	0.5-0.7	0.9-1.1	1.5-2.0	2.5-3.8	5.0-6.3	9.0-12	16-25	30-40	50-63	75-100	160-250
	Ra μm	0.025	0.05	0.1	0.2	0.4	0.8	1.6	3.2	6.3	12.5	25	50
चिन्ह SYMBOL													

4	DY.CEE/D-III	DESCRIPTION CORRECTED	
3	-	REDRAWN IN NX WITH 3RD ANGLE PROJECTION	25-05-10
2	AME/DAD	NOTES 3 TO 10 ADDED, THREAD P WAS 1"BSPP	07-09-01
1	AME/DAD	PASSIVATED ADDED. THD. WAS BSP.	19-08-98
परिवर्तन संख्या ALT. NO.	प्राधिकार AUTHY	वर्णन DESCRIPTION	दिनांकित आद्यक्षर DATED INITIAL



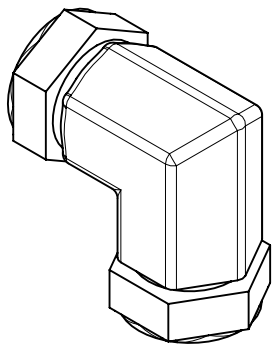
NOTES:-

- 1.REMOVE ALL BURRS AND SHARP EDGES.
- 2.BODY & BACK NUT SHOULD BE ZINC COATED (PLATED) PASSIVATED. 1
- 3.ALL DIMENSIONS ARE IN mm EXCEPT OTHERWISE STATED.
- 4.DIMENSIONS A,C,D ARE TYPICAL FINGER-TIGHT.
- 5.GENER TOLERANCE ON DIMENSIONS: (a)BELOW 1": $\begin{smallmatrix} +0.02 \\ -0 \end{smallmatrix}$ (b)ABOVE 1": $\begin{smallmatrix} +0.04 \\ -0 \end{smallmatrix}$ EXCEPT 'T'.
- 6.ISO 7/1 & ISO 228/1 FOR TAPER AND PARALLEL THREADS RESPECTIVELY.
- 7.ELBOW UNIONS ARE TO BE MACHINED FROM FORGED BLANK AND NOT TO BE CAST.
- 8.THIS FITTING IS TO BE SWAGED ON S.S.TUBES (Gr.304) OF HARDNESS 90 HRB MAX.
- 9.ALL THE PARTS OF THE FITTINGS SHOULD BE CONCENTRIC AND BE CAPABLE OF SELF-ALIGNMENT WHEN ASSEMBLED WITH PROPER SIZE TUBING.
- 10.NUTS & FERRULES OF PARTICULAR SIZE SHALL BE INTERCHANGEABLE FOR EACH TYPE.

SL.NO	T TUBE O.D.	A	C	D	E MINIMUM OPENING	F WRENCH PAD	G HEX. FLAT	Hx
1.	1"	1.93"	1.04"	1.23"	0.88"	1 3/8"	1 1/2"	1.45"

USED FOR LOCO WAP-5,WAG-9

ORIGINAL SUPPLIER-SWAGELOK/USA




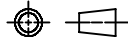
धातु-वेल्डन चिन्ह भा. मा. : 813 / अ. मा. सं. :2553 WELDING SYMBOLS TO IS:813 / ISO:2553	अनिर्दिष्ट सद्य - सीमा भा. मा. : 2102 / अ. मा. सं. : 2768 UNSPECIFIED TOLERANCE TO IS : 2102 / ISO : 2768											TOL. CLS.	
	पदांक GRADE NO.	सं1 N1	सं2 N2	सं3 N3	सं4 N4	सं5 N5	सं6 N6	सं7 N7	सं8 N8	सं9 N9	सं10 N10	सं11 N11	सं12 N12
	Rz	0.16-0.3	0.5-0.7	0.9-1.1	1.5-2.0	2.5-3.8	5.0-6.3	9.0-12	16-25	30-40	50-63	75-100	160-250
	Ra μ m	0.025	0.05	0.1	0.2	0.4	0.8	1.6	3.2	6.3	12.5	25	50
सतह - रुक्षता का मान भा. मा. 3073 / अ. मा. सं. 1302 SURFACE ROUGHNESS VALUE TO IS:3073 / ISO:1302	चिन्ह SYMBOL												

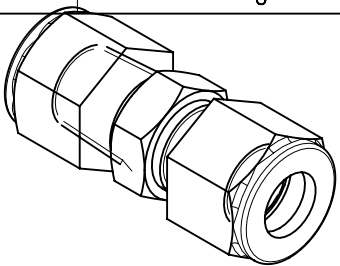
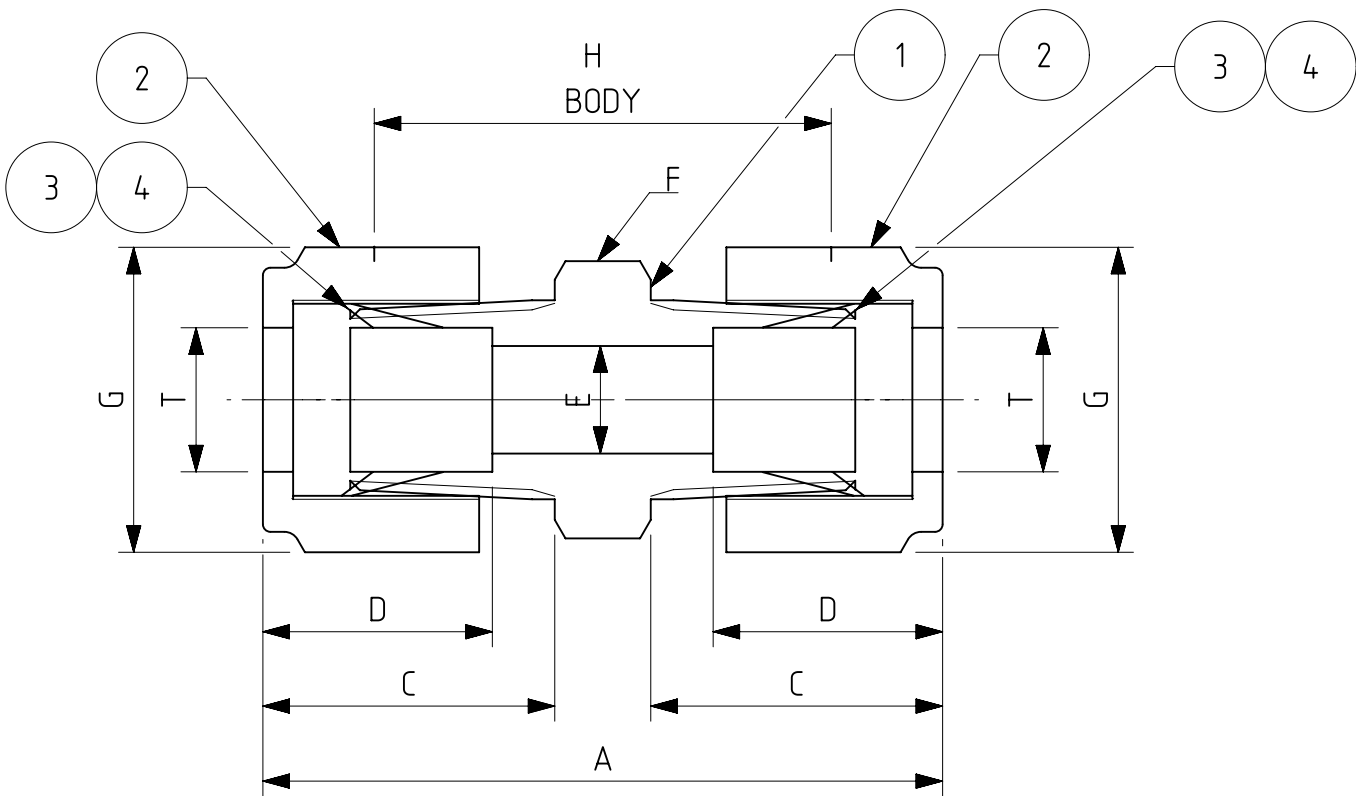
4		REDRAWN IN NX WITH 3RD ANGLE PROJECTION	20-06-11
3	AME/D&D	WAP-5 CLASS OF LOCO ADDED	15-01-03
2	AME/D&D	NOTES 3 TO 10 ADDED	07-09-01
4	AME/D&D	PASSIVATED AND ANOX WITH 3RD ANGLE PROJECTION	20-06-11

परिवर्तन संख्या	प्राधिकार	वर्णन	DESCRIPTION	दिनांकित आधार
ALT. NO.	AUTHY			DATED INITIAL

4		BACK FERRULE	2	STAINLESS STEEL	GR.316	
3		FRONT FERRULE	2	STAINLESS STEEL	GR.316	
2		BACK NUT	2	CARBON STEEL	ASTM A 108	
1		BODY	1	CARBON STEEL	ASTM A 108	

निर्देश संख्या	लागत एवं वितरण संख्या	अंग आरेखण संख्या	वर्णन	मात्रा	पदार्थ	विशिष्टि	प्रति भार कि. ग्रा.
REF. NO.	C&D NO.	PART DRG. NO.	DESCRIPTION	QTY.	MATL	SPECN	WT. EACH IN K.G.

अधिकृतित DGN		<div></div>		चित्तरंजन रेलइंजन कारखाना CHITTARANJAN LOCOMOTIVE WORKS, INDIA	
जोधा व.अ.अ. CHD SSE		<div><div>ALOK KUMAR CHAKRABORTY</div><div><small>Digitally signed by ALOK KUMAR CHAKRABORTY DN: cn=ALOK KUMAR CHAKRABORTY, o=CHITTARANJAN LOCOMOTIVE WORKS, ou=INDIA, email=alok.kumar@clw.co.in</small></div></div>		प्रति भार कि. ग्रा. WT. EACH IN KG	
समीक्षित स.वि.अ. / व.वि.अ. REVIEWED AEE / SEE		<div><div>Pradeep Prasad Khatana</div><div><small>Digitally signed by Pradeep Prasad Khatana DN: cn=Pradeep Prasad Khatana, o=CHITTARANJAN LOCOMOTIVE WORKS, ou=INDIA, email=pradeep.khatana@clw.co.in</small></div></div>		विशिष्टि SPECN	
अनुमोदित च.मु.वि.अ. APPROVED DYCEE		<div><div>ARUP KUMAR MITRA</div><div><small>Digitally signed by ARUP KUMAR MITRA DN: cn=ARUP KUMAR MITRA, o=CHITTARANJAN LOCOMOTIVE WORKS, ou=INDIA, email=arup.kumar@clw.co.in</small></div></div>		वर्णन ELBOW UNION SPECIAL	
दिनांक DATE		24-09-20		DESCRIPTION	
रैखिक अनुपात SCALE		1:1		आरेखण संख्या DRAWING NO.	
संदर्भ / REF. 182-00533 ALT-		<div><div></div></div>		परिवर्तन संख्या ALTERATION NO.	
		4		पुर्ण SHEET	
		1 OF 1		A3	




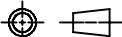
NOTE:

1. REMOVE ALL BURRS AND EDGES.
2. BODY & BACK NUT SHOULD BE ZINC PLATED (10 μ)/PASSIVATED. $\triangle 1$
3. ALL DIMENSIONS ARE IN mm EXCEPT OTHERWISE STATED.
4. ISO 7/1 & ISO 228/1 FOR TAPER AND PARALLEL THREADS RESPECTIVELY.
5. DIMENSIONS A,C,D ARE TYPICAL FINGER-TIGHT.
6. GENERAL TOLERANCES ON DIMENSIONS:
(a) BELOW 1" $+0.2''$
-0
(b) ABOVE 1" $+0.04''$
-0 EXCEPT 'T'
7. THIS FITTING IS TO BE SWAGED ON SS TUBES (Gr.304) OF HARDNESS 90 HRB MAX.
8. ALL THE PARTS OF THE FITTINGS SHOULD BE CONCENTRIC AND BE CAPABLE OF SELF-ALIGNMENT WHEN ASSEMBLED WITH PROPER SIZE TUBING.
9. NUTS & FERRULES OF PERTICULAR SIZE SHALL BE INTER CHANGEBLE FOR EACH TYPE.
10. USED FOR LOCO WAG-9, WAP-7 & WAP-5.

ORIGINAL SUPPLIER - SWAGELOC/USA

SL. NO.	T TUBE O.D.	A	C	D	E MINIMUM OPENING	F WRENCH PAD (HEX. FLAT)	G HEX. FLAT	H
1	10 mm	1.77"	0.76"	0.66"	0.28"	5/8"	11/16"	1.19"
2	1/2"	2.02"	0.86"	0.90"	0.41"	13/16"	7/8"	1.22"
3	1"	2.55"	1.04"	1.23"	0.88"	1-3/8"	1-1/2"	1.59"
4	1-1/2"	4.25"	1.78"	1.97"	1.34"	2-1/8"	2-1/4"	2.11"

4			BACK FERRULE	2	STAINLESS STEEL	GR. 316	
3			FRONT FERRULE	2	STAINLESS STEEL	GR. 316	
2			BACK NUT	2	CARBON STEEL	ASTM A108	
1			BODY	1	CARBON STEEL	ASTM A108	
निर्देश संख्या	लागत एवं वितरण संख्या	अंग आरेखण संख्या	वर्णन	मात्रा	पदार्थ	विशिष्ट	प्रति भार कि. ग्रा.
REF. NO.	C&D NO.	PART DRG. NO.	DESCRIPTION	QTY.	MATL	SPECN	WT. EACH IN K.G.

अधिकल्पित DGN			चित्तरंजन रेलइंजन कारखाना CHITTARANJAN LOCOMOTIVE WORKS, INDIA				
जॉचा व.अ.अ. CHD SSE	SUBHANK AR KUMBHAK AR <small>Digitaly signed by SUBHANK AR KUMBHAKAR Date: 2020.11.23 15:05:19 +05'30'</small>		पदार्थ MATL		प्रति भार कि. ग्रा. WT. EACH IN KG		
समीक्षित स.वि.अ. / व.वि.अ. REVIEWED AEE / SEE	Pradeep Khatana <small>Digitaly signed by Pradeep Khatana Date: 2020.11.23 13:44:17 +05'30'</small>		विशिष्ट SPECN				
अनुमोदित च.यु.वि.अ. APPROVED DYCEE	ARUP KUMAR MITRA <small>Digitaly signed by ARUP KUMAR MITRA Date: 2020.11.23 17:33:39 +05'30'</small>		वर्णन DESCRIPTION		UNION SPECIAL		
दिनांक DATE	23-09-20		आरेखण संख्या DRAWING NO.				
रैखिक अनुपात SCALE	2:1		1209-18.306-028				
संदर्भ / REF. 182-00532 ALT- 0			परिवर्तन संख्या ALTERATION NO.	5	पर्ण SHEET	1 OF 1	A3

धातु-वेल्डन चिन्ह भा. मा. : 813 / अ. मा. सं. :2553 WELDING SYMBOLS TO IS:813 / ISO:2553	अनिर्दिष्ट सद्य – सीमा भा. मा. : 2102 / अ. मा. सं. : 2768 UNSPECIFIED TOLERANCE TO IS : 2102 / ISO : 2768											TOL. CLS.	
	पदांक GRADE NO.	स1 N1	स2 N2	स3 N3	स4 N4	स5 N5	स6 N6	स7 N7	स8 N8	स9 N9	स10 N10	स11 N11	स12 N12
सतह – रुक्षता का मान भा. मा. 3073 / अ. मा. सं. 1302 SURFACE ROUGHNESS VALUE TO IS:3073 / ISO:1302	Rz	0.16-0.3	0.5-0.7	0.9-1.1	1.5-2.0	2.5-3.8	5.0-6.3	9.0-12	16-25	30-40	50-63	75-100	160-250
	Ra μ m	0.025	0.05	0.1	0.2	0.4	0.8	1.6	3.2	6.3	12.5	25	50
	चिन्ह SYMBOL												