META	09 2: 2242 2229 Ce	II : 98410 54818	E-mail : metalt	estingcentrechennai@gmail.c
	redited Laborate	ory ISO / IEC	: 17025 o	
Dept	of Science & Te	chnology, G	ovt. of Ind	ia mar
No. 1, Parti	neeban Street, L	Jliagaram, C	hennai - 6	00 091.
	TEST F	REPORT		TC - 624
M/s.		Report Date		27.08.2020.
MDM Engineering & Tech	nologies	Report No.		WTC/20-21/51197
No. 4, Padasali Street, Pl Melavanambakkam, Cho	KM Cross Street,	Vour Def / De		
monayananibanaani, one	IIIIAF000093.	Tour Ker. / Ke	iceived Date : 1	DONO.U69121.U8.2U21
		Test Method	·	S:9879-1998 (RA201)
Lab No. : ULR NO. TC-6248 20	0 000 70666 F.	Tested Date	14	27.08.2020.
			_	
DESCRIPTION : 12	2 X 25 MM SS FL	AT SAMPLE		
SPECIFICATION : IS	:6911 of 1992 Gr	ade XD4Cr17	Ni12Mo2 (	SS 316)
			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	000107
Chemical analysis	Units	Required		Findings
Corbon	(0/)			
Mancanoco	(%)	80.0	max	0.033
Ollioon	(70)	2.00	max	1.089
Culabur	(%)	1.00	max	0.300
	(%)	0.030	max	0.009
Cleanstance	100 0 1		1777 MIL	0.005
Phosphorus	(%)	0.045	XEIII	0.000
Phosphorus Chromium	(%) (%)	0.045 16.00 to	18.00	16.765
Phosphorus Chromium Nickel	(%) (%) (%)	0.045 16.00 to 10.00 to	18.00 14.00	16.765 10.283
Phosphorus Chromium Nickel Molybdenum	(%) (%) (%) (%)	0.045 16.00 to 10.00 to 2.00 to	18.00 14.00 3.00	16.765 10.283 2.189
Phosphorus Chromium Nickel Molybdenum	(%) (%) (%) (%)	0.045 16.00 to 10.00 to 2.00 to	18.00 14.00 3.00	16.765 10.283 2.189
Phosphorus Chromium Nickel Molybdenum	(%) (%) (%) (%)	0.045 16.00 to 10.00 to 2.00 to	118.00 14.00 3.00	16.765 10.283 2.189
Phosphorus Chromium Nickel Molybdenum REMARKS : Sai	(%) (%) (%) (%) mple <i>Conforms</i>	0.045 16.00 to 10.00 to 2.00 to to Specn.	118.00 14.00 3.00	16.765 10.283 2.189
REMARKS : Sal	(%) (%) (%) (%) mple <i>Conforms</i> 6911 of 1992 Gr	0.045 16.00 to 10.00 to 2.00 to to Specn. ade X04Cr17	18.00 14.00 3.00	16.765 10.283 2.189
Phosphorus Chromium Nickel Molybdenum REMARKS : Sai IS: as	(%) (%) (%) (%) mple <i>Conforms</i> 6911 of 1992 Gr per results report	0.045 16.00 to 10.00 to 2.00 to to Specn. ade X04Cr17 ed.	18.00 14.00 3.00	16.765 10.283 2.189
Phosphorus Chromium Nickel Molybdenum REMARKS : Sal IS: as 1	(%) (%) (%) mple <i>Conforms</i> 6911 of 1992 Gr per results report	0.045 16.00 to 10.00 to 2.00 to to Specn. ade X04Cr17 ed.	18.00 14.00 3.00	16.765 10.283 2.189
Phosphorus Chromium Nickel Molybdenum REMARKS Sal IS: as	(%) (%) (%) (%) mple <i>Conforms</i> 6911 of 1992 Gr per results report	0.045 16.00 to 10.00 to 2.00 to to Specn. ade X04Cr17 ed.	18.00 14.00 3.00	16.765 10.283 2.189
REMARKS Sal	(%) (%) (%) (%) mple <i>Conforms</i> 6911 of 1992 Gr per results report	0.045 16.00 to 10.00 to 2.00 to to Specn. ade X04Cr17 ed.	18.00 14.00 3.00	16.765 10.283 2.189
Phosphorus Chromium Nickel Molybdenum REMARKS Sa IS: as	(%) (%) (%) (%) mple <i>Conforms</i> 6911 of 1992 Gr per results report	0.045 16.00 to 10.00 to 2.00 to to Specn. ade X04Cr17 ed.	тах 18.00 14.00 3.00	16.765 10.283 2.189
Phosphorus Chromium Nickel Molybdenum REMARKS Sal IS: as	(%) (%) (%) (%) mple Conforms 6911 of 1992 Gr per results report	0.045 16.00 to 10.00 to 2.00 to to Specn. ade X04Cr17 ed.	TTTAX 18.00 14.00 3.00 7NI12Mo2	16.765 10.283 2.189
Phosphorus Chromium Nickel Molybdenum REMARKS Sal IS: as 1 (i) The test results relate only to the items (iii) Test Report shall not be reproduced exe & collection of tested sample shall be r	(%) (%) (%) (%) mple Conforms 6911 of 1992 Gr per results report s tested. (ii) Any correct cept in full, without writte made within 15 days fro	0.045 16.00 to 10.00 to 2.00 to to Specn. ade X04Cr17 ed.	TTTAX 18.00 14.00 3.00 7Ni12Mo2 ate not attested Laboratory. (iv) ort.	(SS 316) shall invalidate this certificate Reporting of any discrepancies
(i) The test results relate only to the items (iii) Test Report shall not be reproduced exit & collection of tested sample shall be r	(%) (%) (%) (%) (%) (%) mple Conforms 5911 of 1992 Gr per results report s tested. (ii) Any correct cept in full, without write made within 15 days fro	0.045 16.00 to 10.00 to 2.00 to to Specn. ade X04Cr17 ed.	TTTAX 18.00 14.00 3.00 7Ni12Mo2 ate not attested Laboratory. (iv) ort.	ISS 316)
(i) The test results relate only to the items (ii) The test results relate only to the items (iii) Test Report shall not be reproduced exists & collection of tested sample shall be reproduced exists MBMM	(%) (%) (%) (%) mple Conforms 6911 of 1992 Gr per results report s tested. (ii) Any correct cept in full, without writte made within 15 days fro	0.045 16.00 to 10.00 to 2.00 to to Specn. ade X04Cr17 ed.	TTTAX 18.00 14.00 3.00 7Ni12Mo2 ate not attested Laboratory. (iv) ort.	shall invalidate this certificate Reporting of any discrepancies
(i) The test results relate only to the items (ii) The test results relate only to the items (iii) Test Report shall not be reproduced exit & collection of tested sample shall be r MBUM N. BHOOPALAI	(%) (%) (%) (%) (%) (%) (%) <b>EXAMPLE Conforms</b> <b>6911 of 1992 Gr</b> per results report s tested. (ii) Any correct cept in full, without writte made within 15 days fro	0.045 16.00 to 10.00 to 2.00 to to Specn. ade X04Cr17 ed.	THAX 18.00 14.00 3.00 7NI12MO2 Attention attested Laboratory. (iv) ort.	16.765 10.283 2.189 (SS 316) shall invalidate this certificate Reporting of any discrepancies TESTING CENTRE
(i) The test results relate only to the items (ii) The test results relate only to the items (iii) The test results relate only to the items (iii) Test Report shall not be reproduced exists & collection of tested sample shall be reproduced exists N. BHOOPALAI CHECKERM	(%) (%) (%) (%) (%) mple Conforms 6911 of 1992 Gr per results report s tested. (ii) Any correct cept in full, without writte made within 15 days fro	0.045 16.00 to 10.00 to 2.00 to to Specn. ade X04Cr17 ed. tion in this certification approval of the m the date of report	Thax 18.00 14.00 3.00 7Ni12Mo2 ate not attested Laboratory. (iv) ort.	ISS 316) shall invalidate this certificate Reporting of any discrepancies

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MICROLAB

AN IS/ISO/IEC 17025 METALLURGICAL TEST HOUSE

Accredited by NABL, Dept. of Science & Technology, Govt. of India.

SP101, 2nd Main Road, Ambattur Industrial Estate, Chennai - 600 058. Ph : 044 2624 2525 E-mail : cre@microlabchennai.com Web : www.microlabtesting.com



#### ULR - TC681519000034193F

TEST REPORT

Customer :	Report No / Date	ML/26907/1/19-20 Dt-30 Oct 2019
M/s.MDM Engineering And Technologies No: 4, Padasalai Street, PKM Cross Street, Melawanambakkam	Your ref./ Date	SL No: 305 Dt-29 Oct 2019
	Our ref./ Date	TOCR :26907/19-20 Dt: 29 Oct 2019
Chennai-95	Date of Testing	30 Oct 2019
	Sample Drawn By	Customer
	Sample Description	Sheet Size: 3.15mm Thk Material: IS 2062 E250A Heat No: C362709 Qty: 1No

1	Chemical Analysis (Fe)	IS 8811-1998		
	Test Parameters	Specified Value	Observation	
	Carbon (C) (%)	0.23 max	0.152	
	Silicon (Si) (%)	0.40 max	0.020	
	Manganese (Mn) (%)	1.50 max	0.885	
	Phosphorus (P) (%)	0.045 max	0.012	
	Sulphur (S) (%)	0.045 max	0.005	
	Carbon Equivalent (CE) (%)	0.42 max	0.305	

Remarks : The above chemical composition MEETS the requirement of IS 2062 Grade E250 A

#### Verified By : T K Murugan

#### For MICROLAB

PL Saravanan-Quality Manager Authorized Signatory

End of the test report





NOTE: This report relates only to the particular sample submitted for test 
Any correction in the report will invalid te this report 
Samples will be destroyed after 15 days from date of completion of tests unless informed by the customer 
Any complaints about this report should be communicated in writing with in 7 days form the date of receipt of report 
This report cannot be reproduced except in full 
Sample description is given as described by the customer 
Sampling is not carried out by the laboratory.



AN ISO/IEC 17025 MATERIAL TESTING LABORATORY



SP101, 2nd Main Road, Ambattur Industrial Estate, Chennai - 600 058. Ph : 044 2624 2525, 044 2624 4388 E-mail : cre@microlabchennai.com Web : www.microlabtesting.com



#### ULR - TC68152000007716F

## TEST REPORT

Customer	Report No / Date	ML/43426/2/19-20 Dt-07 Mar 2020
M/s.MDM Engineering And Technologies No: 4, Padasalai Street, PKM Cross Street, Melayyanambakkam, Chennai-95	Your ref./ Date	SI.No: 491 Dt-04 Mar 2020
	Our ref./ Date	TOCR :43426/19-20 Dt: 06 Mar 2020
	Date of Testing	07 Mar 2020
	Sample Drawn By	Customer
	Sample Description	Sheet Size: 1mm Material: SS 304 S2 Qty: 1No

1	Chemical Analysis (Fe)	ASTM E1086-2014	
	Test Parameters	Specified Value	Observation
	Carbon (C) (%)	0.03 max	0.026
	Silicon (Si) (%)	1.00 max	0.436
	Manganese (Mn) (%)	2.00 max	1.41
	Phosphorus (P) (%)	0.045 max	0.032
	Sulphur (S) (%)	0.030 max	0.002
	Chromium (Cr) (%)	17.50-20.0	18.23
	Nickel (Ni) (%)	8.00-12.00	8.40

Remarks : The above chemical composition MEETS the requirement of IS 6911 X02Cr19Ni10 Grade 304S2

Verified By : T K Murugan

# For MICROLAB

PL Saravanan-Quality Manager Authorized Signatory

End of the test report





NOTE : This report relates only to the particular sample submitted for test 
Any correction in the report will invalidate this report 
Samples will be destroyed after 15 days from date of completion of tests unless informed by the customer 
Any complaints about this report should be communicated in writing with in 7 days form the date of receipt of report 
This report cannot be reproduced except in full 
Sample description is given as described by the customer 
Sampling is not carried out by the laboratory.
Laboratory reports the statements of conformity to material specification as per Decision Rule 1, Non Conformity as per Decision Rule 4 & for Rules 2 & 3 customer provides feedback.





## <u>TEST REPORT</u>

Customer :	Report No / Date	ML/11757/1/20-21 Dt-21 Sep 2020
<b>M/s.MDM Engineering And Technologies</b> No: 4, Padasalai Street, PKM Cross Street, Melayyanambakkam.	Your ref./ Date	SI.No: 092 Dt-21 Sep 2020
	Our ref./ Date	TOCR :11757/20-21 Dt: 21 Sep 2020
Chennai-95	Date of Testing	21 Sep 2020
	Sample Drawn By	Customer
	Sample Description	Sheet Size: 1mm Thk Qty: 1No

1	Chemical Analysis (Fe)	ASTM E1086-2014	
	Test Parameters	Specified Value	<b>Observation</b>
	Carbon (C)	0.08 max	0.027
	Silicon (Si)	1.00 max	0.292
	Manganese (Mn)	2.00 max	1.78
	Phosphorus (P)	0.045 max	0.042
	Sulphur (S)	0.030 max	0.004
	Chromium (Cr)	17.5-20.00	18.43
	Nickel (Ni)	8.00-10.00	8.23

Remarks : The above chemical composition MEETS the requirement of IS 6911 Grade X04Cr19Ni9 (304 S1)

#### Verified By : T K Murugan

# For MICROLAB

PL Saravanan-Quality Manager

Authorized Signatory

End of the test report

Note: This report relates only to the particular sample submitted for test . Any correction in the report will invalidate this report . Sample will be destroyed after 15

days from the date of completion of tests unless informed by the customer . Any complaints about this report should be communicated in writing within 7 days from the date of receipt of report . This report cannot be reproduced except in full . Sample descriptions is given as described by the customers . Sampling is not carried out by the laboratory . Laboratory reports the statements of conformity to material specification as per of Decision Rule 1, Non conformity as per Decision Rule 4 & for Rules 2 & 3 customer provides feedback. Format No: ML/QMS/TR/03





# TEST REPORT

Customer :	Report No / Date	ML/43426/1/19-20 Dt-07 Mar 2020
<b>M/s.MDM Engineering And Technologies</b> No: 4, Padasalai Street, PKM Cross Street, Melayyanambakkam	Your ref./ Date	SI.No: 491 Dt-04 Mar 2020
	Our ref./ Date	TOCR :43426/19-20 Dt: 06 Mar 2020
Chennai-95	Date of Testing	07 Mar 2020
	Sample Drawn By	Customer
	Sample Description	Sheet Size: 1.6mm Material: SS 304 S2 Qty: 1No

1	Chemical Analysis (Fe)	ASTM E1086-2014	
	Test Parameters	Specified Value	Observation
	Carbon (C) (%)	0.03 max	0.021
	Silicon (Si) (%)	1.00 max	0.444
	Manganese (Mn) (%)	2.00 max	1.39
	Phosphorus (P) (%)	0.045 max	0.026
	Sulphur (S) (%)	0.030 max	0.002
	Chromium (Cr) (%)	17.50-20.0	18.31
	Nickel (Ni) (%)	8.00-12.00	8.10

Remarks : The above chemical composition **MEETS** the requirement of IS 6911 X02Cr19Ni10 Grade 304S2

## Verified By : T K Murugan

For MICROLAB

PL Saravanan-Quality Manager Authorized Signatory

----- End of the test report

Note: This report relates only to the particular sample submitted for test k Any correction in the report will invalidate this report k Sample will be destroyed after 15





# TEST REPORT

Customer :	Report No / Date	ML/43426/2/19-20 Dt-07 Mar 2020
<b>M/s.MDM Engineering And Technologies</b> No: 4, Padasalai Street, PKM Cross Street, Melayyanambakkam, Chennai-95	Your ref./ Date	SI.No: 491 Dt-04 Mar 2020
	Our ref./ Date	TOCR :43426/19-20 Dt: 06 Mar 2020
	Date of Testing	07 Mar 2020
	Sample Drawn By	Customer
	Sample Description	Sheet Size: 1mm Material: SS 304 S2 Qty: 1No

1	Chemical Analysis (Fe)	ASTM E1086-2014	
	Test Parameters	Specified Value	Observation
	Carbon (C) (%)	0.03 max	0.026
	Silicon (Si) (%)	1.00 max	0.436
	Manganese (Mn) (%)	2.00 max	1.41
	Phosphorus (P) (%)	0.045 max	0.032
	Sulphur (S) (%)	0.030 max	0.002
	Chromium (Cr) (%)	17.50-20.0	18.23
	Nickel (Ni) (%)	8.00-12.00	8.40

Remarks : The above chemical composition **MEETS** the requirement of IS 6911 X02Cr19Ni10 Grade 304S2

## Verified By : T K Murugan

For MICROLAB

PL Saravanan-Quality Manager Authorized Signatory

----- End of the test report

Note: This report relates only to the particular sample submitted for test k Any correction in the report will invalidate this report k Sample will be destroyed after 15





# TEST REPORT

Customer :	Report No / Date	ML/43426/3/19-20 Dt-07 Mar 2020
<b>M/s.MDM Engineering And Technologies</b> No: 4, Padasalai Street, PKM Cross Street, Melayyanambakkam, Chennai-95	Your ref./ Date	SI.No: 491 Dt-04 Mar 2020
	Our ref./ Date	TOCR :43426/19-20 Dt: 06 Mar 2020
	Date of Testing	07 Mar 2020
	Sample Drawn By	Customer
	Sample Description	Sheet Size: 3mm Material: SS 304 S2 Qty: 1No

1	Chemical Analysis (Fe)	ASTM E1086-2014		
	Test Parameters	Specified Value	Observation	
	Carbon (C) (%)	0.03 max	0.022	
	Silicon (Si) (%)	1.00 max	0.439	
	Manganese (Mn) (%)	2.00 max	1.37	
	Phosphorus (P) (%)	0.045 max	0.033	
	Sulphur (S) (%)	0.030 max	0.003	
	Chromium (Cr) (%)	17.50-20.0	18.09	
	Nickel (Ni) (%)	8.00-12.00	8.10	

Remarks : The above chemical composition **MEETS** the requirement of IS 6911 X02Cr19Ni10 Grade 304S2

## Verified By : T K Murugan

For MICROLAB

PL Saravanan-Quality Manager Authorized Signatory

----- End of the test report

Note: This report relates only to the particular sample submitted for test k Any correction in the report will invalidate this report k Sample will be destroyed after 15





## TEST REPORT

Customer :	Report No / Date	ML/43426/4/19-20 Dt-07 Mar 2020
M/s.MDM Engineering And Technologies	Your ref./ Date	SI.No: 491 Dt-04 Mar 2020
No: 4, Padasalai Street, PKM Cross Street, Melavvanambakkam.	Our ref./ Date	TOCR :43426/19-20 Dt: 06 Mar 2020
Chennai-95	Date of Testing	07 Mar 2020
	Sample Drawn By	Customer
	Sample Description	Sheet Size: 3mm Material: SS 409M Qty: 1No

1	Chemical Analysis (FeN)	ASTM E1086-2014, ML/VAL/Fe/2013-2014		
	Test Parameters	Specified Value	Observation	
	Carbon (C) (%)	0.03 max	0.013	
	Silicon (Si) (%)	1.00 max	0.497	
	Manganese (Mn) (%)	0.50-1.50	0.950	
	Phosphorus (P) (%)	0.040 max	0.024	
	Sulphur (S) (%)	0.030 max	0.006	
	Chromium (Cr) (%)	10.80-12.50	11.47	
	Nickel (Ni) (%)	1.50 max	0.357	
	Nitrogen (N)	0.030 max	0.016	

Remarks : The above chemical composition MEETS the requirement of SS 409M

Verified By : T K Murugan

For MICROLAB

PL Saravanan-Quality Manager Authorized Signatory

----- End of the test report

Note: This report relates only to the particular sample submitted for test k Any correction in the report will invalidate this report k Sample will be destroyed after 15