

List of our valuable customers

- Bokaro Steel Plant - SAIL
- Rourkela Steel Plant - SAIL
- IISCO - SAIL
- Durgapur Steel Plant
- Mecon
- Bhusan Steel Ltd.
- Bhilai Steel Plant - SAIL
- Indian Oil Corporation
- Haldia Petrochemical Ltd.
- Danieli India Ltd.
- Siemens VAI Metals Technologis Pvt. Ltd.
- Shapoorji Pallonji & Co. Ltd.
- Visakhapatnam Steel Plant (RINL)
- Neelachal Ispat Nigam Ltd.
- Jindal Steel & Power Ltd.
- VISA Steel Ltd.
- Heavy Engineering Corporation
- Bharat Pump & Compressor Ltd.
- Hoogly Dock & Port Engg. Ltd.
- GAIL India Ltd.
- Electro Steel Castings Ltd.
- SMS India Ltd.
- ONGC
- BHEL
- Indian Air Force
- IOCL
- HPCL
- SECL, WCL, NCL, ECL
- Indian Railways
- Masagon Port Trust



SONI RUBBER PRODUCTS LTD.

(AN ISO 9001 COMPANY)



Head Office :

Soni Rubber Products Ltd.

(AN ISO 9001 COMPANY), 4, Princep Street, Kolkata 700 072,
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Punjab Hydraulics Private Limited, 67, Bentinck Street, Kol-69

Works :

Banagram, P.O.- Rashpunja,
Thakurpukur, Bakra Hat Road,
South 24 Parganas-700104
West Bengal,
India

Approval No. I/05176

Certificate of Approval

This is to certify that the Quality Management System
at

Soni Rubber Products Ltd.

Office : 4, Princep Street, Kolkata – 700 072, West
Bengal, India

Works : Banagram, P.O. – Rashpunja, Thakurpukur,
Bakra Hat Road, South 24 Parganas – 700 104,
West Bengal, India


has been examined by Assessors of QMS Certification Services
and found to be conforming to the requirements of

ISO 9001:2008

In respect of the following activities:

**Manufacture and Supply of Rubber Hoses,
Assemblies & Fittings**

This certificate is valid from 04/09/2010 to 04/09/2012*
Original Certification 01/12/2000


Sanjay Kaushik
Chief Executive Officer - SAARC



CERTIFICATION SERVICES
ABN 57 060 251 096



* To verify the validity of this certificate please visit www.jas-anz.com.au/register
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• To check the validity of this certificate please go to www.qms.com.au-QMS-Certified-Client
QMS Certification Services Pty. Ltd. P.O. Box 2069, Lakeside, 2256, New South Wales, Australia

Accreditation by the Joint Accreditation System of
Australia and New Zealand, Ref No. 2 141089AA

Introduction

SONI Rubber has created the vista of an exciting future with its STAINLESS STEEL FLEXIBLE HOSES by adopting the Latest Hi-Tech Technology such as continuous Tube Welding and Corrugation Forming Machines in both ways i.e. hydraulically formed and mechanically formed hoses. Further with its latest adoption of 96,48 & 36 Carrier Braiding Machines makes SONI a most reliable source in India and world Wide. These SONI Hoses & Hose Assemblies are invaluable help in transmitting a wide range of media such as Oxygen, Steam, Hot Air, Hot Water besides other solids, liquids and gases. The most demanding environments, in which these flexible corrugated SS Hoses & Hose Assemblies are installed, include :-

- His / Sub Zero Temperatures
 - High Pressure
 - continuous Movement of SS Hose Link requiring high degree of flexibility
- Need to carry corrosive materials that require the highest standards of safety and reliability.



Helicals & Annular Corrugated Hose made of (304, 321, 316) Technical Data Sheet
 reinforcement of single, double & triple AISI 304, 321 & 316 braid

Flexibility: Type B, BS6501 Part I.

Nom. I.D. mm	Hose Type	Max. Hose. O.D.	Bend Radius Static	Max. Working Pressure BAR	Max. Test Pressure BAR	Min. Burst Pressure BAR	Weight Kg/m.	Nom. I.D. mm	Hose Type	Max. Hose. O.D.	Bend Radius Static	Max. Working Pressure BAR	Max. Test Pressure BAR	Min. Burst Pressure BAR	Weight Kg/m.
6	SONIBX0	10.00	16	100	15	40	0.088	1/4"	SONIBX0	0.394	0.630	145	218	580	0.059
	SONIBX1	11.40	25	167	250	668	0.170		SONIBX1	0.449	0.984	2420	3630	9680	0.114
	SONIBX2	12.80	25	220	330	880	0.250		SONIBX2	0.504	0.984	3190	4790	12760	0.168
8	SONIBX0	12.00	20	10	15	40	0.130	5/16"	SONIBX0	0.472	0.788	145	218	580	0.087
	SONIBX1	13.40	38	136	204	544	0.230		SONIBX1	0.528	1.496	1970	2960	7880	0.154
	SONIBX2	14.70	38	210	315	840	0.330		SONIBX2	0.579	1.496	3045	4568	12180	0.221
10	SONIBX0	14.90	22	5.5	8.3	22	0.170	3/8"	SONIBX0	0.587	0.866	80	120	320	0.144
	SONIBX1	16.30	40	100	150	400	0.280		SONIBX1	0.642	1.575	1450	2180	580	0.188
	SONIBX2	17.7	40	178	167	712	0.390		SONIBX2	0.693	1.575	2580	387	10320	0.261
12	SONIBX0	19.20	24	5.5	8.3	22	0.240	1/2"	SONIBX0	0.756	0.945	80	120	320	0.161
	SONIBX1	20.7	50	95	143	380	0.430		SONIBX1	0.811	1.969	1375	2060	5500	0.288
	SONIBX2	22.0	50	154	230	616	0.600		SONIBX2	0.866	1.969	2230	3350	8920	0.402
16	SONIBX0	23.00	80	5	7.5	20	0.260	5/8"	SONIBX0	0.906	3.150	70	105	280	0.174
	SONIBX1	25.00	100	70	105	280	0.500		SONIBX1	0.984	3.938	1015	1523	4060	0.335
	SONIBX2	27.00	120	125	188	500	0.760		SONIBX2	1.063	4.725	1810	2720	7240	0.510
20	SONIBX0	28.00	100	4.1	6.2	16.4	0.350	3/4"	SONIBX0	1.102	3.938	60	90	240	0.235
	SONIBX1	30.00	120	72	108	288	0.600		SONIBX1	1.181	4.725	1040	1560	4160	0.402
	SONIBX2	32.00	130	131	197	524	0.870		SONIBX2	1.260	5.119	1900	2850	7600	0.583
25	SONIBX0	35.00	120	4.1	6.2	16.4	0.470	1"	SONIBX0	1.378	4.725	60	90	240	0.315
	SONIBX1	37.00	140	65	98	260	0.850		SONIBX1	1.457	5.513	940	1410	3760	0.570
	SONIBX2	39.00	150	102	153	408	1.250		SONIBX2	1.535	5.906	1480	2220	5920	0.838
32	SONIBX0	43.00	140	3.4	5.1	13.6	0.510	1.1/4"	SONIBX0	1.693	5.513	50	75	200	0.342
	SONIBX1	45.00	160	46	69	184	0.960		SONIBX1	1.772	6.300	667	1000	2670	0.644
	SONIBX2	47.00	170	85	128	340	1.430		SONIBX2	1.850	6.694	1230	1850	4920	0.959
40	SONIBX0	51.00	180	2.4	3.6	9.6	0.700	1.1/2"	SONIBX0	2.008	7.088	35	53	140	0.469
	SONIBX1	53.00	200	40	60	160	1.180		SONIBX1	2.087	7.875	580	870	2320	0.791
	SONIBX2	55.00	210	72	108	288	1.680		SONIBX2	2.165	8.269	1045	1570	4180	1.126
50	SONIBX0	62.00	220	1	1.5	4	0.850	2"	SONIBX0	2.441	8.663	15	23	60	0.570
	SONIBX1	64.00	240	33	50	132	1.750		SONIBX1	2.520	9.450	478	720	1910	1.173
	SONIBX2	66.00	250	60	90	240	2.680		SONIBX2	2.598	9.844	870	1300	3480	1.797
65	SONIBX0	79.00	280	1	1.5	4	1.141	2.1/2"	SONIBX0	3.110	11.025	15	23	60	0.765
	SONIBX1	82.00	300	26	39	104	2.700		SONIBX1	3.228	11.813	377	720	1920	1.810
	SONIBX2	85.00	200	46	69	184	4.000		SONIBX2	3.346	7.875	667	1000	2670	2.682
80	SONIBX0	97.00	350	1	1.5	4	1.620	3"	SONIBX0	3.819	13.781	15	23	60	1.086
	SONIBX1	100.00	370	22	33	88	3.120		SONIBX1	3.927	14.569	320	480	1280	2.092
	SONIBX2	103.00	380	40	60	160	4.660		SONIBX2	4.055	14.963	780	870	2320	3.123
100	SONIBX0	122.00	400	49	1.04	28	2.000	4"	SONIBX0	4.803	15.050	10	15	40	1.341
	SONIBX1	125.00	430	18.4	27.6	73.6	3.700		SONIBX1	4.921	16.931	267	400	1068	2.481
	SONIBX2	128.00	450	33	49.5	132	5.500		SONIBX2	5.039	17.719	480	720	1920	3.687
125	SONIBX0	151.00	500	.69	1.04	2.8	2.800	5"	SONIBX0	5.945	19.688	10	15	40	1.877
	SONIBX1	155.00	520	11.5	17.3	46	5.000		SONIBX1	6.102	20.475	167	250	668	3.352
	SONIBX2	159.00	540	20.7	31	82.8	7.250		SONIBX2	6.260	21.263	300	450	1200	4.861
150	SONIBX0	180.00	600	.55	83	2.2	3.800	6"	SONIBX0	7.087	23.625	8	12	32	2.548
	SONIBX1	184.00	630	11.2	16.8	44.8	6.600		SONIBX1	7.244	24.806	162	243	648	4.425
	SONIBX2	183.00	650	20	30	80	9.500		SONIBX2	7.402	25.594	229	435	1160	6.369
200	SONIBX0	240.00	800	.31	.46	1.24	6.700	8"	SONIBX0	9.449	31.500	4.5	6.8	18	4.492
	SONIBX1	245.00	830	7	11	28	12.000		SONIBX1	9.646	32.681	102	153	408	8.045
	SONIBX2	250.00	850	10	15	40	17.600		SONIBX2	9.843	33.469	145	218	580	11.800

Metal Hoses

Flexible Metal Hoses for critical applications at high temperature and pressure to ensure safety and reliability of installations
 Metal Hose Assemblies

Metal Hose: The Stainless Steel Flexible Hose is manufactured by using tested stainless steel strips as per AISI 304, 321, 316 & 316L. The Material and thickness of the strip is selected according to the application of the hose. The Flexibility of Hose is obtained by the convoluted construction of the HOSE & PITCH. The Pitch can be varied to achieve required flexibility and pressure rating. The SONI range of hoses comes from 1/4" to 12" dia which are Hydraulically formed and mechanically formed hoses.
 SONI Manufacturers three basic kinds of Metal Hoses.

- 1 Annular Corrugated Hoses.
- 2 Helical Corrugated Hoses.
- 3 Strip wound Round / Polygonal Interlock Type Hoses.

1. Annular Corrugated Hoses :

Our Annular Corrugated Hoses are manufactured from 1/4" to 12" Dia by continuously processing the material on a high-speed automatic forming machine. It is welded longitudinally and it consists of annular corrugation. This corrugation is distinguished by two advantages compared with helical corrugated stainless steel hoses: easier brazing or welding conditions for fixing connection pieces and capability to absorb small axial movements. They have good flexibility, high strength, and are heat resistant and pressure tight. These Hoses can be used to convey most kinds of fluids, gases and liquids, chemicals etc. and can function to absorb reciprocating motion. Thermal expansion, vibration and misalignment. Stainless steel wire braiding can be provided for higher-pressure ratings and external protection.

2. Helical Corrugated Hoses :

Our Helical Corrugated Hoses are manufactured from 1/4" to 2" Dia. Our helical type hose exhibits all the advantages of our annular hose. This hose is formed into a continuous 'spiral' corrugation, adding advantages such as substantially longer lengths, self-draining characteristics and greatly increased

pressure capabilities. It is best suitable to Piping Connections and Gas Connectors.

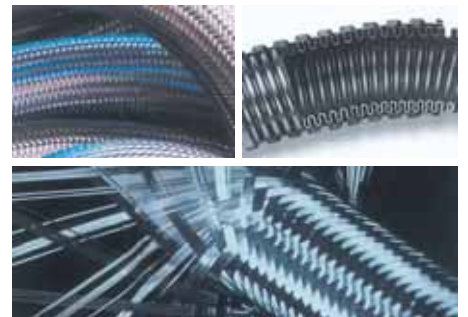
Note: Technical data of helical hoses are available on request

Flexible Grades

- The standard pitch hose with class "B" flexibilities as per BS 6501 part-I, or equivalent.
- Fine pitch Hose with maximum flexibility as per class "C" of BS 6501 or equivalent for most arduous flexing & high frequency movement at high temperature and high pressure.

The Braid

SONI provides full range of Braiding on Metallic Hoses. It comprises from 1/4" to 12" dia with its 96,48 & 36 Carrier Braiding Machines. These are the latest computerized equipments totally controlled by the software, which gives correct and parallel dimensions on over all lengths of braids. When the corrugated hose is subjected to pressure. It tends to open axially. The wire braid provides prevention against elongation caused by the pressure on the hose and increases hoses pressure strength and provides physical protection against damage to the tube. The SS Hose, a braid collar and the braid are joined together by TIG welding process to produce a flexible SS Hose Assembly. The Braid is made of SS wire to AISI 304 or 316. The angle of lay, wire thickness, number of wire ends are carefully selected to meet the various application requirements and these are maintained perfectly due to computerized machines on over all lengths of braids produced. The braid is woven in such a way that line pressure produces braid tension, which provides radial and axial constraint prohibiting elongation of inner tubes.



Metal Hoses Assemblies

The SONI Advantage

Our metal Hose Assemblies, offer the following advantages :

- Experience of more than 25 years.
- Ingenious, flexible and cost-effective solutions for engineering applications.
- Safety in service.
- Uninterrupted service at elevated temperature upto 800°C and sub-zero temperature of upto -200° C.
- Pressure Range: Maximum pressure up to 5000 PSI and more, depending upon size and operating conditions.
- Guarantee of reliability, even when carrying corrosive fluids, steam, oxygen etc. at high pressure,
- High physical and mechanical strength.
- Joins misaligned pipes in rigid piping networks.
- Replaces rigid piping connections at inaccessible locations.
- High life expectancy.
- Approved by national, international inspection agencies...
- An ideal and cost-effective substitute for Rubber Hose.

SONI Metal Hose Assemblies comprises of:

- S.S.Flexible Corrugated Hose.
- Over Braid-Single/Double/Triple Braid.
- End fittings - as per various standards such as DIN, AISI & BS or as per customer requirements.
- Steel (Flexible) or Asbestos/Glass Fibre cover used for very special applications.
- Inside/outside liner, used for better flow and extra protection.
- Size range 1/4" to 12" and above

End Fittings

These are the means by which the custom designed assembly is attached to the point of application - the pipe work system. The End Fittings are attached to the SS Hose Assembly through highly advanced technique of TIG welding process.

Various designs of end fittings manufactured from C.I / Steel / Brass / Stainless Steel, suitable for diverse applications, as per various standard such as DIN, AISI & BS are available. The In-house facilities of SONI is equipped with latest CNC Machines, Lathe Machines, Capstan Machines and other necessary machines to manufacture any kind of end fittings perfectly as per required standard and dimensions in any number of quantity to deliver the Hose Assemblies on time, SONI also keeps thousands of standard end fittings ready in stock so as to deliver the standard hose assemblies before the delivery schedule.



Quality Assurance Measures

Each and every S.S.Hose assembly passes through the following tests compulsorily before despatch :

- High Pressure test as per stipulated norms.
- D. P. Test.
- X-Ray Radiography test & any other test specified by the customer
- Any third party inspection.
- The Hose Assemblies will meet all the requirements stipulated in BS 6501, Part 1, 1991, (Latest editions) or equivalent

Experience

SONI experience is your surest guarantee of reliability and cost effective performance. SONI have the experience of supplying flexible corrugated S.S. Metal hose assemblies for various critical applications in Steel Industry, Power Plants, Oil Industries, Chemical Engineering, process pipeline and Petrochemicals refineries etc.

SONI specialises in the production of hose assemblies for vibration absorption. The hose assemblies are called vibration eliminators. These are used in piping network in buildings to absorb vibrations from pumping units. They are used in air conditioning units as well.

Applications

A Wide range of applications of SONI Metal Hoses & Hose Assemblies:

- i) Steel Industry.
 - Blast Furnace, ■ Electric Furnace.
 - Basic Oxygen Furnace, ■ Ladle Furnace.
 - Coke Plants. ■ Slab, Rolling, Rod, Finishing & Sintering Mills.
- ii) Power Plants.
- iii) Chemical Plants,
- iv) Oil & Gas Industry,
- v) Atomic & Nuclear Energy Establishments.
- vi) Fertilizer Industry.
- vii) Petrochemical Plants.
- viii) Defence Industry.
- ix) Aero scope Industry.
- x) Shipping Industry.
- xi) Pumps & Valves Industry.
- xii) Glass Furnaces.
- xiii) Air Conditioning Systems.
- xiv) Oil Burner Systems.



Oxygen Lance Hose

SONI and its associates have been manufacturing and marketing Flexible Stainless Steel Corrugated Hose Assemblies for LD/BOF Plant for converters from 130 MT to 300 MT capacity to carry Oxygen and cooling water.

These S.S.Hose Assemblies, installed in all the major Steel Plants in India, have given extremely satisfactory performance.

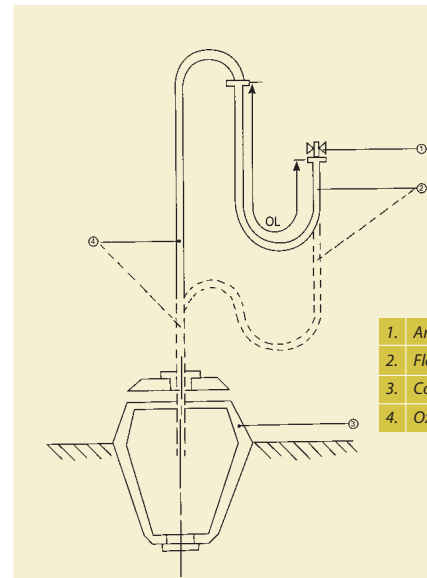
SONI have supplied hose assemblies in sizes ranging from 4", 5" & 6" and upto 8" (200mm) NB and lengths upto 25 Mtrs.

SONI's all metal Corrugated Hose Assemblies with latest design features, which ensure safety and reliability required in a product used in a furnace area, are the favoured choice of steel makers. The Oxygen Lance Hose Assemblies comprise of the following:

Bellow type S.S. Corrugated Hose, which is safe, pressure tight and wear resistant, (The elastic deformation of corrugations allow constant flexure and virtually no fatigue).

Inside Liner : Stripwound S.S.Liner is used to ensure turbulence-free, smooth flow and also reduce vibration. A special perforated strip is used in SONI hose assemblies to eliminate implosion in case of sudden pressure drop or stoppage of flow.

High Strength S.S. Wire braiding (Two layers).



1. Anchor
2. Flexible Hose
3. Converter
4. Oxygen Lance

Diameter Inches/mm	Working Pressure BAR	Test Pressure BAR	Burst Pressure BAR	Bend Radius Minimum	Flow Rate M ³ /Minute
3/80	16	32	64	450 mm	200
4/100	15	30	60	560 mm	400
5/125	16	32	160	710 mm	630
6/150	16	32	120	815 mm	815
8/200	16	32	120	1000 mm	950
10/250	16	32	90	1400 mm	1300

Note: Text pressure, burst pressure, bend radius & flow rate can be achieved as per customer requirements.

Nominal Dia (DN) :	mm
Overall Length (OL) :	mm
Velocity of Lance Hose :	m/mm
Ambient Temperature :	°C
Medium :	
Operating Pressure :	bar
Maxim : Pressure :	bar
Flow Rate :	m ³ /h
No. of Charges :	per day
No. of Blasts :	per charge



Outer protective Cover :

Some steel plants require an extra cover over the wire braiding as an additional protection against mechanical stresses, radiant heat and slag splashes. An asbestos covering or an interlock joint strip wound hose is used.














End Fittings to match connections at the lance and also the piping network carrying oxygen to the lance. S.S.End connections are fitted on the S.S.Hose as per well laid out procedure by licensed and experienced welders utilising TIG welding process. The weld quality is radiographically sound to ensure high pressure integrity in a steel melting shop. The SONI Oxygen Lance Hose Assembly is manufactured to guarantee optimum performance, safety, reliability and durability which satisfies all the tests and norms stipulated in BS 6501 1991 or equivalent.

A typical 200 mm dia 25 mtrs long Oxygen lance Hose Assembly supplied by SONI for a basic Oxygen furnace in 2.5 million tone Steel Plant, has the following values:

Operating Pressure	: 16.5 BAR
Test Pressure	: 25.0 BAR
Burst Pressure	: 90.0 BAR
Class of Flexibility	: 'C' as per BS 6501/91.
Weld Quality	: Radiographically sound



End Fittings

	Fixed Male (Hexagon)	<p>Manufactured from Mild Steel, Stainless Steel or Brass, these are secured by argon welding (TIG) or brazing on S.S. Hose depending upon Hose type and service condition to form a complete Hose Assembly.</p>			
	Female Union (Nut/Nipple)				Male/Female Adaptor Threads B.S.P.T./B.S.P.P. or N.P.T./B.S.P.P.
	Fixed Male (Barrel)				Full Male Union (Swivel Male)
	Fixed Female (Hexagon)				Full Female Union (Swivel Male)
	Pipe End				Fixed Flange DIN, BS Or ASA
	Welding Stub				Swivel Flange DIN, BS Or ASA
	90° Female Swept Elbow				Cam Action Coupling

Our Products Range

