MANNESMANN
STAINLESS TUBES
A Member of the Salzgitter Group

NUCLEAR

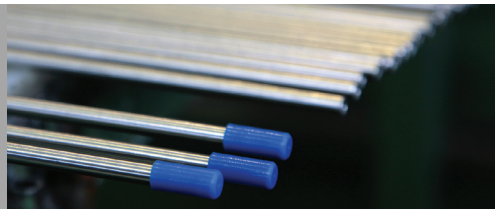
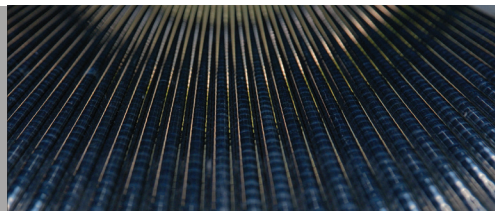
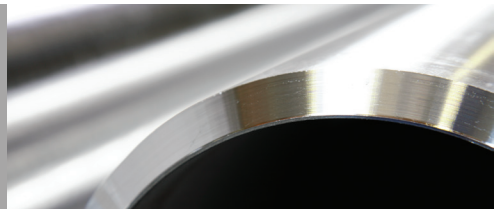
Nuclear standards: Nuclear pedigree.

From the control of our raw materials to final inspection, certification and shipment we apply the highest standards of product integrity.

From the development of **PWR** power generation for the French (**RCC-M**) and US (**ASME III**) programs our knowledge and skills have developed across the global technologies: **CANDU**, **VVER**, China **CPR**'s and India **PHWR**'s .

Applying our skills to the latest generation of **EPR** power plants whilst partnering with developing technologies and sciences in **Fusion, Small Modular Reactors, and molten salt applications**.

Products & Applications

Class 1, 2 & 3 Instrumentation tubes according to RCC-M, ASME III, CSA N285 and HAF 604 standards.	**Dimensions:** 6 mm (1/4") to 25 mm (1") outside diameter.	
In Core applications: RCCA, Guide Thimble tubes, Neutron flux distribution, thermocouples.	**Dimensions:** Outside diameter from 1.6 mm (1/16") in straight or coiled forms to 280 mm (11.02").	
Heat Exchanger tubes used for critical components within the Nuclear Island, typically in the secondary circuit (class 2).	**Dimensions:** 12.7 mm (1/2") to 50.8 mm (2") outside diameter, straight lengths or U tube form up to 43 m (141 ft) long.	
Nuclear pipes for Class 1,2 & 3 Piping for Nuclear steam supply systems and non-nuclear island applications such as Nuclear fuel reprocessing.	**Dimensions:** 6 mm (¼") to 280 mm (11.02") outside diameter.	

Nuclear Grades

MST designation	Nearest equivalent standard			Typical chemical composition [1]					
	AFNOR	UNS	EN	C_{max}	Cr	Ni	Mo	Cu	Others
DMV 304L	Z2CN18-10 Z2CN19-10	S30403	1.4306	0.03	19.0	11.0			Co < 0.1
DMV 4335		S31002	1.4335	0.02	25	21	<=0.2	-	N <=0.11
DMV 321		S32100	1.4541	0.08	18.5	10.5			5 x C < Ti < 0.6%
DMV 316L	Z5CND17-12	S31603	1.4404		0.03	17.0	12.0	2.25	
DMV 316LN		S31653	1.4429		0.03	17.0	12.5	2.75	0.12 < N < 0.22
DMV 800		N08800	1.4876	0.08	21.0	32.0			Ti < 0.40
DMV 600L		N06600	2.4817	0.025	16.0	76.0			Fe 8
DMV 690		N06690	2.4642	0.02	29.0	60.0			Fe 9
DMV 400		N04400	2.4360	0.15		65.0		30.0	Fe 2; Mn 1.5

Mechanical Properties

MST designation	Nearest equivalent standard		Density		Min. mechanical prop. at RT			
	UNS	EN			Rp0.2 Yield Strength		Rm Tensile Strength	
			g/cm^3	lb/in^3	MPa	ksi	MPa	ksi
DMV 304L	S30403	1.4306	7.9	0.29	170	25	485	70
DMV 4335			7.9	0.29	205	30	500	31
DMV 321	S32100	1.4541	7.9	0.29	170	25	485	70
DMV 316L	S31603	1.4404	8.0	0.29	170	25	485	70
DMV 316LN	S31653	1.4429	8.0	0.29	205	30	515	75
DMV 800	N08800	1.4876	8	0.29	210	31	500	73
DMV 600L	N06600	2.4817	8.4	0.30	180	26	550	80
DMV 690	N06690	2.4642	8.2	0.29	205	30	585	85
DMV 400	N04400	2.4360	8.8	0.32	180	26	450	65

Quality: Zero Accident- our goal, our focus, our culture

Across our global manufacuturing locations the health & safety of everyone on our sites is paramount.
The well-being of employees, contractors and visitors is our first priority.

At Mannesmann Stainless Tubes we take pride in meeting and exceeding our customer's quality expectations.
We have Quality Management Systems which are approved by the world's leading organisations such as;
ASME, ISO, TüV, DNV, JIS and Lloyd's Register

Sustainability Roadmap: embracing the Ecovadis Sustainability Assessement ratings methodology with respect to Environment – Labour & Human Rights – Ethics – Sustainable Procurement.

Our customer approvals & accreditations reflect our commitment to the manufacture of the highest integrity products.

Quality

Our Nuclear quality system approvals reflect our experience and commitment to global Nuclear technologies.

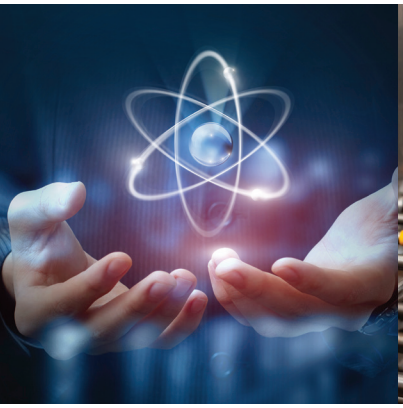
- √ ASME III certified
- √ HAF 604- NNSA certified
- √ RCC-M compliant, Label Fournisseur Framatome.
- √ ISO 19443: pending certification
- √ Extensive Customer and design code accreditations.

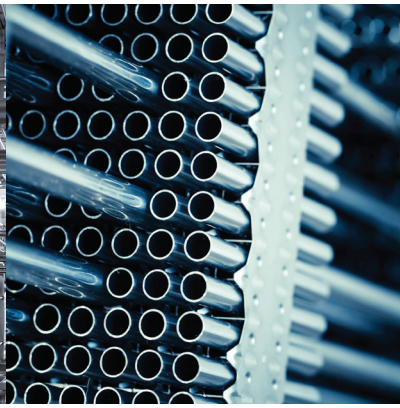
Adding Value, Adding Service

Adding value by providing finished machined reactor core liner components in 410 martensitic stainless.

Global Manufacturing, Local Service

Bringing together our manufacturing facilities in Germany, France, Italy and USA, our Global Sales Team is at your service, ensuring we provide the optimum solution to your requirements.



DMV 304L

DMV 617mod

DMV 690

DMV 625

DMV 316LNRC

DMV 600L

DMV 316LN

DMV 4335

DMV 316L

DMV 310

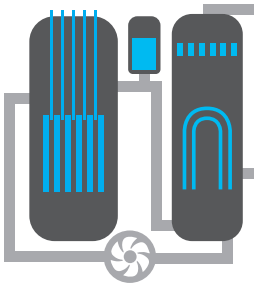
DMV 304LNC

DMV 410

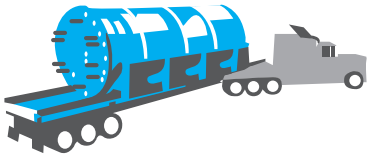
DMV 321

DMV 400

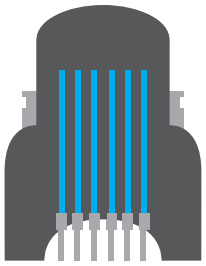
DMV 800



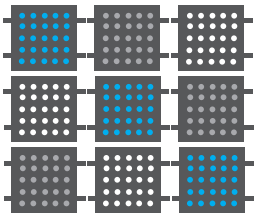
NUCLEAR STEAM SUPPLY SYSTEM



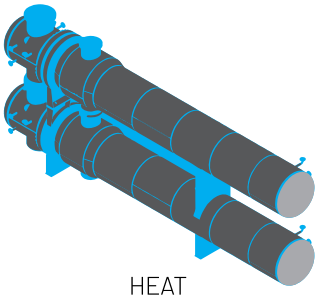
SMR



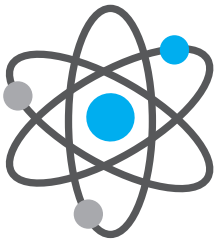
INSTRUMENTATION & CONTROL



IN-CORE



HEAT EXCHANGERS



FUSION

Nuclear Product Range EN 10/2023

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