



Stenca

TRADING



Stenca HT Pipe
High quality pipe insulation





The Company

Stenca Trading has existed since 1995 and is owned as well as lead by Sten Nielsen and Thøger Jokumsen. Today, Stenca Trading is among the top suppliers of insulation for cold, heat, fire and noise reduction, plus marine and ship interior design products. However, during the last couple of years the company has also moved in to other industrial areas with new developed quality products.

Stenca Trading has a constant influence upon the continuous development and the creation of products within the insulation, Offshore and marine industry. We already deliver materials in many parts of the world from the North Sea to Singapore to Qatar.

The people behind Stenca Trading have been involved with the insulation and marine industry for several decades. They have hand-on knowledge of the business as well as theoretical knowledge (B.Sc.). Thus, your company will be given the utmost guidance within both the application of a product in addition to its advantages with respect to the given insulation challenge.

Stenca Trading always intends to inspire a dynamic development within all the industries where we operate. We are dedicated to develop and produce high quality products in terms of insulation capabilities in addition to safety and environmental issues. Thus, our products are undertaken thorough testing before they are introduced to the market.

Today Stenca Trading has four locations in Denmark, like sales offices in Norway and Germany, and we have partner agencies in different parts of the world.

The philosophy of the company is to supply our customer with good products and know-how service as fast as possible.

Stenca Motto:

- There is always a solution
- Innovative thinking
- Rather quality than quantity
- Fast delivery



The Stenca HT Pipe

Stenca HT Pipe provides a high standard for insulation of high temperature pipes and for all areas where fire protection is demanded.

Stenca HT Pipe is a high quality insulation product for pipes in addition to it is made of a Non-combustible material.

The Stenca HT Pipe system consists of prefabricated pipe insulation shells produced in all kinds of pipe dimension, prefabricated plates for tanks and vessels, and prefabricated flanges and valve boxes.

The upper limit of temperature for Stenca HT Pipe is 950°C. Periodically up to 1100°C with only 44 mm insulation thickness.

The core material is Calcium Silicate which provides good insulation and noise reduction abilities. Calcium silicate is furthermore PH-neutral.

Stenca HT Pipe is pre-coated with an anti static glass fibre cloth, which makes the product waterproof and UV resistant like it makes steel covering unnecessary.

The density of the pipes is only 335 kg/m³.

The Stenca HT Pipe 60 mm has made a JET FIRE TEST 60 minute with remarkable results: The Average temperature was 219 degrees.





Data sheet of Stenca HT Pipe



MATERIAL VERIFICATION

Facing:

The Stenca HT Pipe-sections comes with a fire resistant factory applied ceramic-cloth.

The insulation material is composed of calcium silicate type Skamol SuperPro 300, and the ceramic-cloth is a glass fiber mat type SCF/6 fitted to the insulation.

Density:

Skamol SuperPro 300 has a density of 300 kg/m³

Ceramic-cloth is silicone coated with a density of 600 kg/m³

The total thickness is approx. 44 mm with a density of 335 kg/m³

Assembling:

The Stenca HT Pipe has tong & groove to ensure an easy installation of the pipe sections. To seal the sections the sealant Stenca Fire Seal is used which is a specially developed seal/adhesive.

Acoustics:

The Stenca HT Pipe can improve the level of environmental sound considerably. If a higher standard of acoustic insulation is necessary – please see the Acoustic section.

Handling and storage:

Stenca HT Pipes are easy to cut to any shape with an ordinary saw.

Stenca HT Pipes are waterproof. After installation of the pipe sections they are wiped off with a moist cloth. Stenca HT Pipe can handle pressure and has a non-slip surface. Thus, employees standing up on the insulated pipe will not reduce or damage the insulation.

When applying Stenca HT Pipe insulation to your pipe system, you should note that you can yourself change the angles with a conventional saw.

Maintenance:

Once the Stenca HT Pipes have been installed they do not need maintenance.

Health and safety:

A safety data sheet is available and can be replied by all of Stenca Trading departments.

Dimensions:

Additional pipe dimensions can be carried out according to order – see Technical data.

Foam bends are divided into 2 sections.

Elbows:

As standard the Stenca HT Pipe system comes with 90 degree elbows. However, we can provide you with different angles according to your request.



Technical data of Stenca HT Pipe

Standard Pre-formed Stenca HT Pipe with ceramic-cloth facing:



Pipe sections dimensions	Inside dimensions (D)	Outside dimensions (A)	* Heat-resistance maximum	Insulation thickness	Section Length (L)
1/2"	16,0 mm	96,0 mm	950 °C	40 mm	600 mm
3/4"	28,9 mm	108,9 mm	950 °C	40 mm	600 mm
1"	35,7 mm	115,7 mm	950 °C	40 mm	600 mm
1 1/2"	50,3 mm	130,3 mm	950 °C	40 mm	600 mm
2"	62,3 mm	142,3 mm	950 °C	40 mm	600 mm
3"	90,9 mm	170,9 mm	950 °C	40 mm	600 mm
4"	116,3 mm	196,3 mm	950 °C	40 mm	600 mm
6"	170,3 mm	250,3 mm	950 °C	40 mm	600 mm
8"	223,1 mm	303,1 mm	950 °C	40 mm	600 mm
10"	277,0 mm	357,0 mm	950 °C	40 mm	600 mm
12"	325,9 mm	405,9 mm	950 °C	40 mm	600 mm
16"	410,4 mm	490,4 mm	950 °C	40 mm	600 mm
18"	461,2 mm	541,2 mm	950 °C	40 mm	600 mm
20"	512,0 mm	592,0 mm	950 °C	40 mm	600 mm
24"	613,6 mm	693,6 mm	950 °C	40 mm	600 mm

* The heat-resistance temperature can periodically go up to 1100 °C without problems.

Other dimensions can be delivered after special request.

Surface temperatures at different thermal situations

Temperature	100°C		200°C		300°C		400°C		500°C		600°C		700°C			
	HF	SF	HF	SF	HF	SF	HF	SF	HF	SF	HF	SF	HF	SF		
Layer thickness	W/m ²		°C		W/m ²		°C		W/m ²		°C		W/m ²		°C	
SuperPro 300	W/m ²		°C		W/m ²		°C		W/m ²		°C		W/m ²		°C	
30 mm	131	34,5	320	51,1	533	67,4	771	83,6	1034	99,5	1321	115,3	1634	131,0		
35 mm	115	32,9	280	47,8	465	62,5	672	77,1	900	91,6	1150	106,1	1420	120,5		
40 mm	102	31,7	248	45,2	413	58,5	596	71,9	798	85,3	1018	98,6	1256	111,9		
45 mm	92	30,6	224	43,0	372	55,3	536	67,6	716	80,0	913	92,4	1126	104,8		
50 mm	84	29,8	203	41,2	338	52,6	486	64,1	650	75,6	828	87,2	1021	98,8		
55 mm	77	29,1	187	39,7	309	50,3	416	61,0	590	71,8	758	82,8	934	93,6		
60 mm	71	28,4	172	38,4	286	48,3	411	58,4	549	68,6	699	78,8	861	89,2		

NOTE: Fire Class J60 The Stenca HT Pipe with a thickness of 60 mm cover with steel can be delivered for fire classification J-60. Test report is available on request.



Grade Sheet of Core Material of Stenca HT Pipe

SuperPro 300




Grade		SuperPro 300
Maximum service temperature		
	°C	1000
Bulk density, dry		
	kg/m ³	300
Compressive strength (EN 1094-5: 1955)		
	MPa	2,8
Modulus of rupture (EN 993-6: 1995)		
	MPa	1,7
Coefficient of reversible thermal expansion (BS 1902: section 5.3: 1990)		
@ 20°C-750°C (68°F-1382°F)	m/(mK)	5.5x10 ⁻⁶
Coefficient of hygric expansion (DTI report)		
@ 23°C 50%RH to 23°C 10%RH	mm/(m%RH)	4.0x10 ⁻³
Coefficient of hygric contraction (DTI report)		
@ 23°C 50%RH to 23°C 100%RH	mm/(m%RH)	0
Sound reduction index		dB
	Thickness 19 mm	26
	Thickness 38 mm	29
	Thickness 60 mm	31
Thermal conductivity (ASTM C-182)		
mean temp.	@ 20°C	W/(m×K) 0,06
	@ 200°C	0,08
	@ 400°C	0,10
	@ 600°C	0,12
Chemical analysis, typical		%
Silica	SiO ₂	47
Calcium oxide	CaO	45
Loss on ignition 1025°C (1877°F)	LOI	6
Water content		
	%	2,5
Colour		Grey
Non-combustibility test:		IMO Res. A.799 (19)

Material safety data sheet is available on request.



Stenca HT Pipe Certification


DET NORSKE VERITAS
 EC TYPE-EXAMINATION CERTIFICATE

Application of: Council Directive 96/98/EC of 20 December 1996 on Marine Equipment as amended by directive 2008/67/EC, issued as "Forskrift om Skipssafety" by the Norwegian Maritime Directorate. This Certificate is issued by Det Norske Veritas under the authority of the Government of the Kingdom of Norway.

CERTIFICATE NO. MED-B-5670

This is to certify that the
Surface materials and floor coverings with low flame-spread characteristics: pipe insulation covers
 with type designation(s)
Stenca HT Pipe / Stenca HT Flange Box / Stenca HT Valve Box

Manufacturer
Stenca Trading A/S
 Aalborg Ø, Denmark

is found to comply with the requirements in the following Regulations/Standards:
 Annex A.1, Item No. A.1/3.18d and Annex B, Module B in the Directive. SOLAS 74, Reg. 8-2/3, 8-2/5, 8-2/6, 8-2/9 & X/3, IMO MSC/Circ. 1120, 2000 HSC Code 7 and IMO FTP Code

Further details of the equipment and conditions for certification are given overleaf.

Høvik, 2009-11-02
 for Det Norske Veritas AS

Elvind Mykland
 Elvind Mykland
 Head of Department

Notified Body No.: 0575

DNV local office:
 DNV Aalborg

This certificate is valid until
 2012-05-15

Amir Dzaferi
 Amir Dzaferi
 Surveyor

Notice: This certificate is subject to terms and conditions overleaf. Any significant changes in design or construction of the product, or amendments to the Directive or Standards referenced above may render this certificate invalid. The product liability rests with the manufacturer or his representative in accordance with Council Directive 96/98/EC, as amended. The Mark of Conformity may only be affixed to the product and a Declaration of Conformity may only be issued when the production/product assessment module referred to in the Council Directive, is fully complied with.

DET NORSKE VERITAS AS, Veritansveien 1, NO-1022 Høvik, Norway, Tel.: +47 67 57 89 00, Fax: +47 67 57 98 11, Org.No. NO 049 748 801 MVA www.dnv.com Form No.: MED 06 Issue: June 2009 Page 1 of 2


DET NORSKE VERITAS
 QS - CERTIFICATE OF ASSESSMENT - EC

Application of: Council Directive 96/98/EC of 20 December 1996 on Marine Equipment as amended by directive 2008/67/EC, issued as "Forskrift om Skipssafety" by the Norwegian Maritime Directorate. This Certificate is issued by Det Norske Veritas under the authority of the Government of the Kingdom of Norway.

CERTIFICATE NO. MED-D-1265

This is to certify that the Quality System for the
Surface materials and floor coverings with low flame-spread characteristics
 with type designation(s) as specified in the Appendix to this Certificate

Manufacturer
Stenca Trading A/S
 Aalborg Ø, Denmark

is found to comply with the requirements applicable to it.
 The quality system for the product, defined in Annex A.1, Item No. A.1/3.18, has been assessed with respect to the procedure of conformity assessment described in Annex B, Module D in the directive.

Limitations:
 Modifications made to the Quality System shall immediately be reported to Det Norske Veritas AS in order to examine whether this Certificate remains valid. Annual periodical audits will be held to verify the validity of the Certificate.

Høvik, 2009-12-07
 for Det Norske Veritas AS

Elvind Mykland
 Elvind Mykland
 Head of Section

Notified Body No.: 0575

DNV local office:
 DNV Aalborg

This Certificate is valid until
 2014-12-07

Amir Dzaferi
 Amir Dzaferi
 Surveyor

The Certificate is subject to terms and conditions overleaf. Any significant changes in design or construction of the product, or amendments to the Directive or Standards referenced above may render this Certificate invalid. The product liability rests with the manufacturer or his representative in accordance with Council Directive 96/98/EC, as amended.

DET NORSKE VERITAS AS, Veritansveien 1, NO-1022 Høvik, Norway, Tel.: +47 67 57 89 00, Fax: +47 67 57 98 11, Org.No. NO 049 748 801 MVA www.dnv.com Form No.: MED Da Issue: October 2009 Page 1 of 2

Other Documentation and Test

- ❖ Report of NORSOK classification
- ❖ Life Cycle Test for Offshore conditions
- ❖ Low Flame Test
- ❖ Non Combustibility Test
- ❖ JET FIRE TEST
- ❖ Mounting Instruction Guide



Offices

Do not hesitate to call us, if you need further information, or we can be helpful in any way at all.

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Reference:

