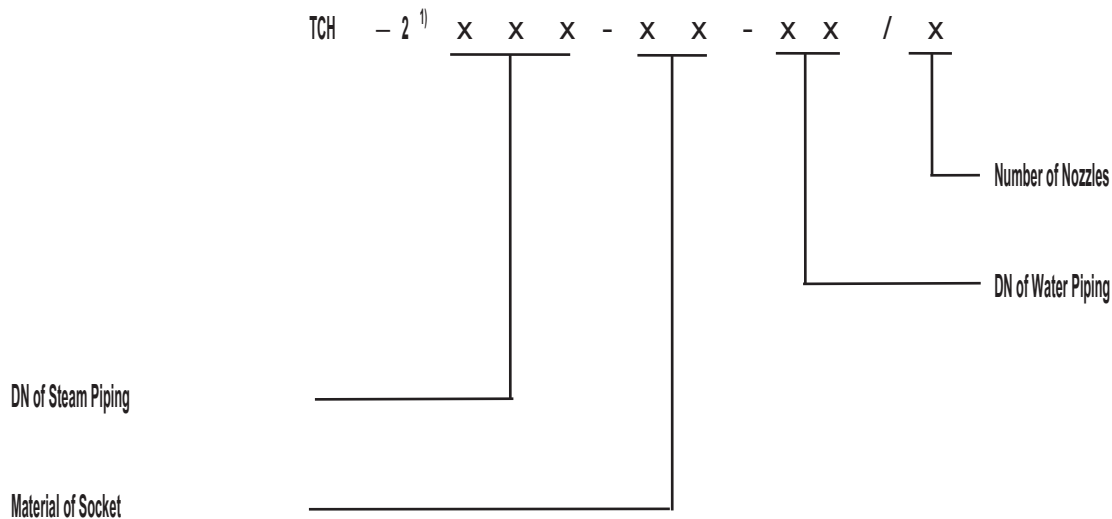


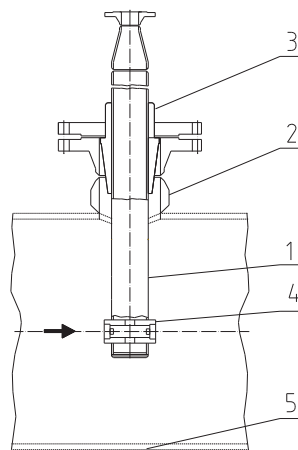


Type	Abbreviation	Name	Labelling
Desuperheater with a swirl chamber	TCH	Nozzle Cooler	TCH-x xxx-xx-xx/x

Type Number Diagram



Notice: ¹⁾ 2- in case of two stage cooling



- 1 – Inlet Pipe Water Injection
- 2 – Socket
- 3 – Carrier of an Injection pipe
- 4 – Nozzle with a Swirl Chamber
- 5 – Steam Piping

Fig.1

Description:

Cooler with a swirl chamber (Fig.1):

This cooler is designed as the whole which is placed into a steam piping through a welded-on pipe flare. The cooler can be removed from a piping as the whole. Its injection nozzles (chambers) are located on an injection carrier which supplies the cooling water. The nozzle itself, which will probably suffer the wear by a cavitation, can be dismantled and replaced, too. The cooler doesn't have a protective shielding. Due to this fact, these coolers are



designed with various numbers of nozzles and their configuration. The basic type consists of two nozzles placed on a common carrier. An axial alignment of a steam piping and nozzle body shall be kept while mounting a cooler to the piping. Only a slight axial movement may allow drops to get to a side of piping in a larger amount.

Supply and injection of water is carried out through a special profiled nozzle (swirl chamber).

While entering a water chamber, the water starts to rotate and the outlet is designed to atomise the cooling water with the minimal potential of individual drop incidence on a side of steam piping.

Notice: In case of two stage cooling the two desuperheaters wit swirl chamber are connected. The minimal distance between desuperheaters is 500 mm.

Labelling of used materials

Material Quality (acc. to ČSN)	Equivalent acc. to DIN	Labelling	Material Quality (acc. to ČSN)	Equivalent acc. to DIN	Labelling	Material Quality (acc. to ČSN)	Equivalent acc. to DIN	Labelling
11 416.1	P265GH	16	15 020.1, .5	15 Mo 3 16 Mo 3	50	17 134.3	X20CrMoV121	14
11 523.1	St 52-3	13	15 121.5	13 CrMo 44 13 CrMo 45	51	17 248.4	X6 CrNiTi 810	28
12 021.1	St 35.8	21	15 128.5, .9	14 MoV 63	58	17 348.4	X6 CrNiMoTi 17-12-2	38
12 022.1	St 45.8	22	15 313.5	10 CrMo 910 11 CrMo 910	53			

Material Quality (acc. to ČSN)	Equivalent acc. to ASTM	Labelling	Material Quality (acc. to ČSN)	Equivalent acc. to ASTM	Labelling	Material Quality (acc. to ČSN)	Equivalent acc. to ASTM	Labelling
11 416.1	A 662	16	15 020.1, .5	A 204-74	50	17 134.3	-	14
11 523.1	A 572	13	15 121.5	A 335 A 213	51	17 248.4	A 240	28
12 021.1	A 106	21	15 128.5, .9	A 405-76	58	17 348.4	A 276	38
12 022.1	A 106-85	22	15 313.5	A 335-75 A 336-75	53			

NOTE: A range of operating temperatures and pressures for materials are specified in the following standard:

ČSN 13 0010 - Nominal pressures and working overpressures.

This standard is valid only for materials acc. to ČSN.

The labelling is valid only for materials acc. to ČSN.