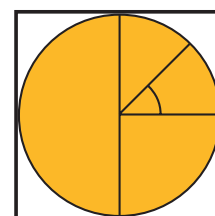


Technical data stainless steel tubes for parabolic trough solar collectors



ENERGIE
SOLAIRE

Description

Stainless steel tubes with selective coating for parabolic trough solar collectors.

Dimensions and characteristics

Substrate	Stainless steel 1.4307 - 304L 3D, mirror polished
Full length	2'572 mm -0+ 5mm
Outer diameter	48.3 mm \pm 0.2 mm
Material thickness	2.0 mm \pm 10%
Tolerances in accordance with DIN 11850	
Straightness	< 3.0 mm/m
Surface area	0.390 m ²
Weight (empty)	5.97 kg
Inner volume	3.96 l
Maximum operating pressure	see graph page 2

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Selective coating

Trade name	C2-80 - AS
Optical properties	$\alpha \cong 0.95$ $\varepsilon \cong 0.15$

Coating qualification tests

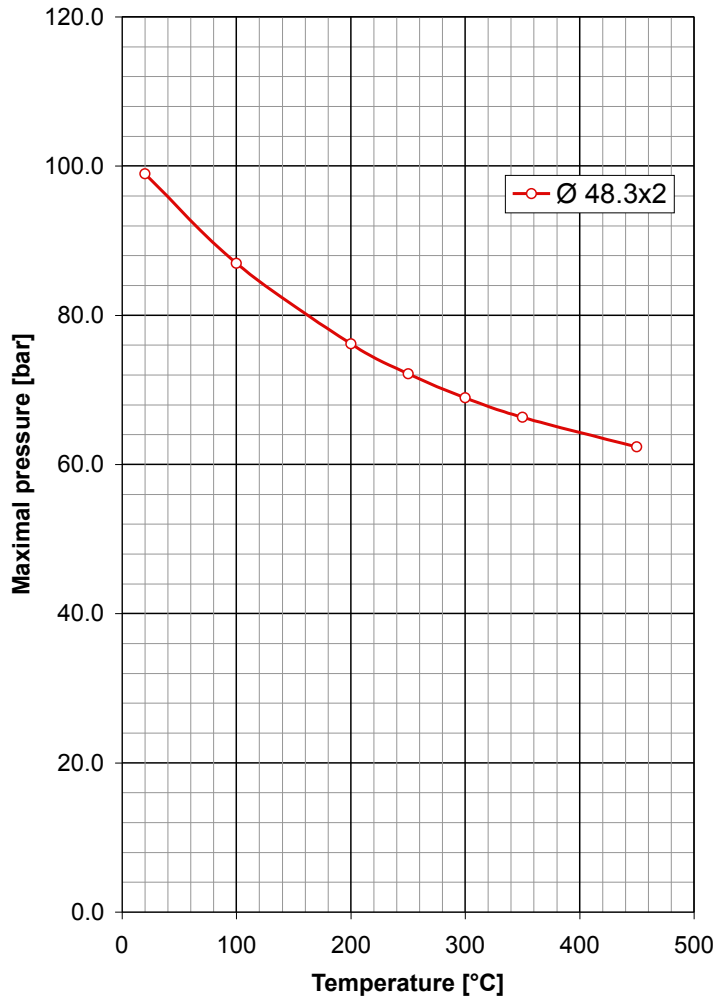
Accelerated aging test with respect to high temperature stability and resistance to high humidity involving condensation described in ISO/CD 12952.2 (MSTC Round Robin).

Kesternich test in accordance with EN ISO 6988

Technical data stainless steel tubes for parabolic trough solar collectors



Stainless Steel Tubes 1.4301 - Calculated maximum strength to the pressure (security factor 2.5)



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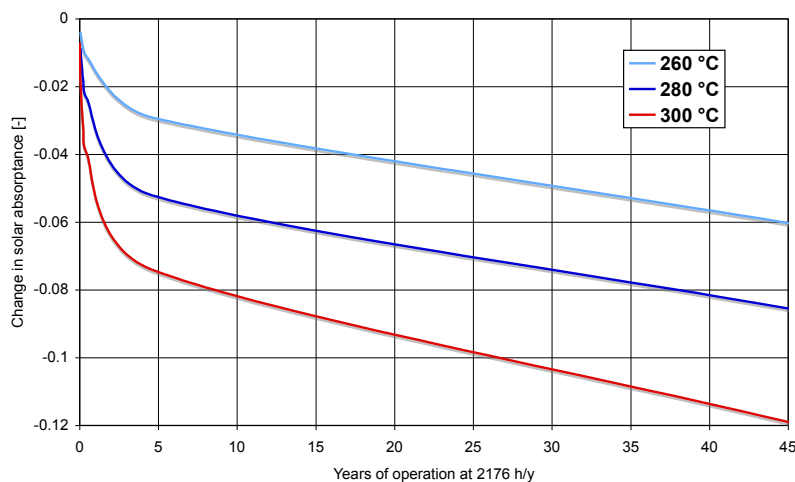
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SIMULATION OF SELECTIVE COATING AGEING



Source : Alterungsprüfung
an Solarabsorbern im
Mitteltemperaturbereich, S.
Brunold, SPF-HSR
BFE-Projektnummer 102349
02 Dezember 2008