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Report
on the
Inspection of a Production Site for Metal Chimney Components

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Inspection office	TÜV SÜD Industrie Service GmbH Abteilung Feuerungs- und Wärmetechnik Inspektionsstelle
Subject of test	metal chimney components manufactured in the production site of Schiedel OOO in 172007 Torzhok (RUS)
Customer	Schiedel OOO Kalinin Street 53 172007 Torzhok Region Tver Russian Federation
Scope	Transfer of results of already performed initial type tests, especially the corrosion tests by evaluation of the conditions for production in the production site
Expert	Dipl.-Ing. (FH) Erich Bottesch
Period of test	2019-03-14
Basis of test	DIN EN 1856-1:2009-09 DIN EN 1856-2:2009-09

swiss safety center ISO 9001 certified system

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1 Scope

On behalf of companies in the Schiedel Group, TÜV SÜD Industrie Service GmbH has performed initial type tests for products of different system chimneys, liners and connecting flue pipes according to DIN EN 1856-1 and DIN EN 1856-2.

TÜV SÜD Industrie Service GmbH has worked as an accredited test laboratory with accreditation according to ISO/IEC 17025 for these tests. The products in test, the extent of the tests and the results are documented in appropriate test reports. The available corrosion tests cover EN 1856-1:2009-09, verification class V2 and take into account different material specifications (AISI 316L, AISI 316TI or AISI 444) for the flue liner.

Schiedel Group has extended its manufacturing sites by the location of Schiedel OOO in 172007 Torzhok. TÜV SÜD Industrie Service GmbH has been ordered to inspect, whether the conditions in this manufacturing site are suitable to apply the results of the available initial type tests regarding corrosion resistance.

2 Basis of inspection

DIN EN 1856-1:2009-09	Chimneys – Requirements for metal chimneys – Part 1: System chimney products
DIN EN 1856-2:2009-09	Chimneys – Requirements for metal chimneys – Part 2: Metal flue liners and connecting flue pipes

Reports on the initial type tests of products according to EN 1856-1 and EN 1856-2

Report AG 655 on the test of corrosion resistance for metal chimney components

Report AG 771 on the test of corrosion resistance for metal chimney components

Report A 1469-00/05 on the test of corrosion resistance for metal chimney components

3 Performance of inspection

An inspection of the manufacturing site has been performed on 2019-03-14 to check the products and especially the conditions of production.

The inspection concentrates especially on the conditions of production in the manufacturing site. An evaluation regarding the conformity of the products with the performance criteria of the standards DIN EN 1856-1:2009-09 and DIN EN 1856-2:2009-09 has been performed for companies in the Schiedel Group already in separate reports. This evaluation of conformity still applies because neither the products nor the standards have changed since then.

The extent of the inspection as well as the results are listed in clause 4.

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4 Inspection results

The extent of inspection, the comments and the evaluation are listed in the following table:

topic	comment	evaluation
General	stainless steel products and galvanised mild steel products (alu-zinc) are processed in the same production areal; however, production is strictly separated, and deep cleaning process is applied	performance accepted
Cutting from coils	marked shears for cutting and applying deep cleaning of all production surfaces and tools in contact to the material in case of a change of material applied measures: cleaning process installed, special training of employees documentation of cleaning process	performance accepted
Rounding machine (2 rolls)	same machine for stainless and mild steel production; however, applying deep cleaning of all rolls and feeding area in contact to the material in case of a change of material applied measures: cleaning process installed, special training of employees documentation of cleaning process	performance accepted
Welding machine (for diameters ≤ DN 350)	welding process and use of protective gas (argon) in line with specification; welding machine for stainless steel only, daily cleaning applied measures: cleaning process installed, special training of employees documentation of cleaning process	performance accepted
Welding machine (for diameters > DN 350)	former welding machine out of order; new machine has been installed intended procedure in line with specification	performance accepted

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topic	comment	evaluation
Expanding machines for female end	stainless steel products and mild steel products are formed on same machine, but using different (marked) tools stored in separate place; however, applying daily intensive cleaning of tools and surfaces which are in contact to the material applied measures: cleaning process installed, special training of employees documentation of cleaning process	performance accepted
Rolling machine for male ends	stainless steel products and mild steel products are formed on same machine, but using different (marked) tools stored in separate place; however, applying daily intensive cleaning of tools and surfaces which are in contact to the material applied measures: cleaning process installed, special training of employees documentation of cleaning process	performance accepted
Transport trolleys	(semi-) finished products are put on trolleys or pallets which are covered with cardboard applied measures: cardboard is renewed before new load	performance accepted
fixing and transportation tool for insulation-wrap (small diameters)	metal contact surfaces with rubber-protectors no contact of metal tools with chimney components	performance accepted
fixing and transportation tool for insulation-wrap (large diameters)	metal contact surfaces with rubber-protectors covering the whole rail, rail made of aluminium profile; no contact of metal tools with chimney components	performance accepted

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topic	comment	evaluation
Plasma cutting machine	extraction of cutting residues by fan applied measures: exhaust pipe behind fan consists of metal liner with tight joints; gas tightness has been tested and fulfils class P1 according to EN 1443	performance accepted
Ware-house	avoidance of contamination by mild steel particles applied measures: all stainless steel products are covered by cardboard boxes or, at least, by plastic foil	performance accepted

5 Summary

The production process in the manufacturing site in Torzhok is suitable to manufacture stainless steel components for metal system chimneys, liners and connecting flue pipes according to DIN EN 1856-1 and DIN EN 1856-2.

So, the results of the initial type tests are transferable. Especially the results of corrosion tests performed for companies in the Schiedel Group are applicable, taking into account the conditions of the production process.

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