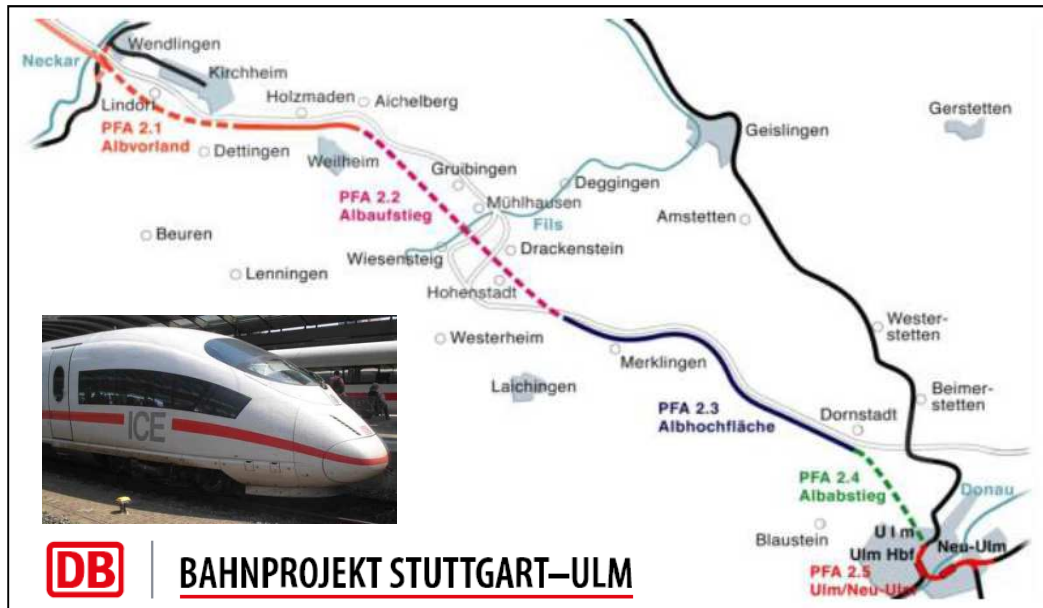




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CTS Segment Gaskets for "The DB-Albvorlandtunnel"



Name / Location of tunnel project:

DB-Albvorlandtunnel / NBS Wendlingen – Ulm PA 2.1 Los a
German High Speed Rail Link between Stuttgart and Ulm
Part of the new European High Speed Rail Network

Owner/Cient:

DB Netz AG (German Railway Authority)

Contractor:

Implenia Construction GmbH Germany, Division of Implenia Group Switzerland

Tunnel diameter:

10.5 m OD / 9.6 m ID – thickness: 0.45 m

Ring design:

4 + 2 counter keys + 1 large key stone = 7 segments per ring / 2.000mm nominal width

Length of tunnel:

2 x 8.17 km

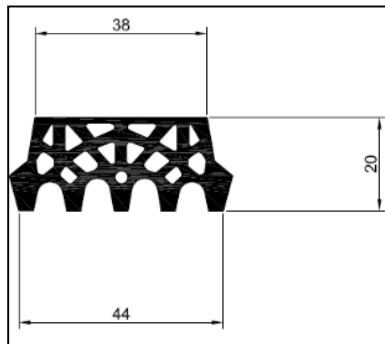


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CTS Segment Gaskets for "The DB-Albvorlandtunnel"

Profile CTS 44/20 "AVT"



CTS Cordes has developed a tailor-made profile geometry that meets the specific design criteria of the project. The outstanding properties of this new geometry are...

- Designed to suit a deeper 44 mm gasket groove than usual for reducing compression loads
- Increased waterproofing performance despite reduction of compression loads
- Additional reserves fulfilling the testing requirements at extreme gap opening up to 8 mm
- Balanced performance with even test pressures proven over all offsets scenarios (0 – 20 mm) achieved by a new developed "archway design" (new international patent)

The outstanding performance has been proven in project-specific waterproofing, load-deflection behavior and stress relaxation testing in accordance with STUVA recommendations carried out at MPA Testing Institute in Hannover, Germany. The extensive testing program spanned over 20 weeks. In addition to the minimum testing requirement of the owner Deutsche Bahn Netz AG (10 bar test pressure at 6 mm gap opening and offsets from 0 to 20 mm) maximum short-term pressures of up to 50 bar were reached. In extreme "worst-case-scenario-testing" conducted in addition to the specified testing program the profile has reached test pressures >10 bar at 8 mm gap opening and 20 mm offset.

Materialprüfstelle für das Bauwesen		
Prüfbericht Nr. 163818 1. Ausfertigung vom 20. Oktober 2016		
Auftraggeber	CTS Cordes tubes & seals GmbH & Co. KG Gölzer Str. 21 13258 Boizenburg / Elbe	
Auftrag vom	05.09.2016 / Herr Diener	
Inhalt des Auftrags	Prüfung der Wasserdichtheit mit Stahlprüfprofilen im T-Stoß gemäß STUVA-Empfehlung für die Prüfung und den Einsatz von Dichtungsprofilen in Tübbingauskleidungen Projekt: Albvorlandtunnel	
Der Prüfbericht umfasst 5 Seiten.		
<small> Der Prüfbericht darf nur eingesehen/verfälscht werden. Die angegebenen Messergebnisse beinhalten die statistischen Auswertung der Prüfergebnisse. Die Ergebnisse beinhalten sich nur auf das geprüfte Prüfmaterial. </small>		
Bearbeiter: Dipl.-Ing. A. Giese Durchgeführt: GFS 119.7.62 – SE 15 E-Mail: a.giese@mpa-bau.de	Ausfertiger: Stelle 3 D-30692 Hannover GEBÄUDE	Telefon: +49 511 762 0108 Telefax: +49 511 762 0031
 Niedersachsens Ministerium für Infrastruktur		



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CTS Segment Gaskets for "The DB-Albvorlandtunnel"



Gasket Frame Production at CORDES, BGT plant,
Boizenburg, Germany



Gasket Frame Installation at Kirchheim near
Stuttgart, Germany



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CTS Segment Gaskets for "The DB-Albvorlandtunnel"



Segment stockyard, Kirchheim, Germany