

Test set-up for the vertical movement of the ducted pipe upwards/downwards. The upper part of the machine is used for linear displacement (stretch) of the ducted pipe.



NOFIRNO sealing system with NOFIRNO filler sleeves around the ducted pipe and at both sides a layer of 20 mm NOFIRNO sealant.



Clearance between the ducted pipe and the conduit sleeve is 30 mm. Movement is set to +10/-10 mm. Test is carried out with low up to highest possible speed of the test machine.

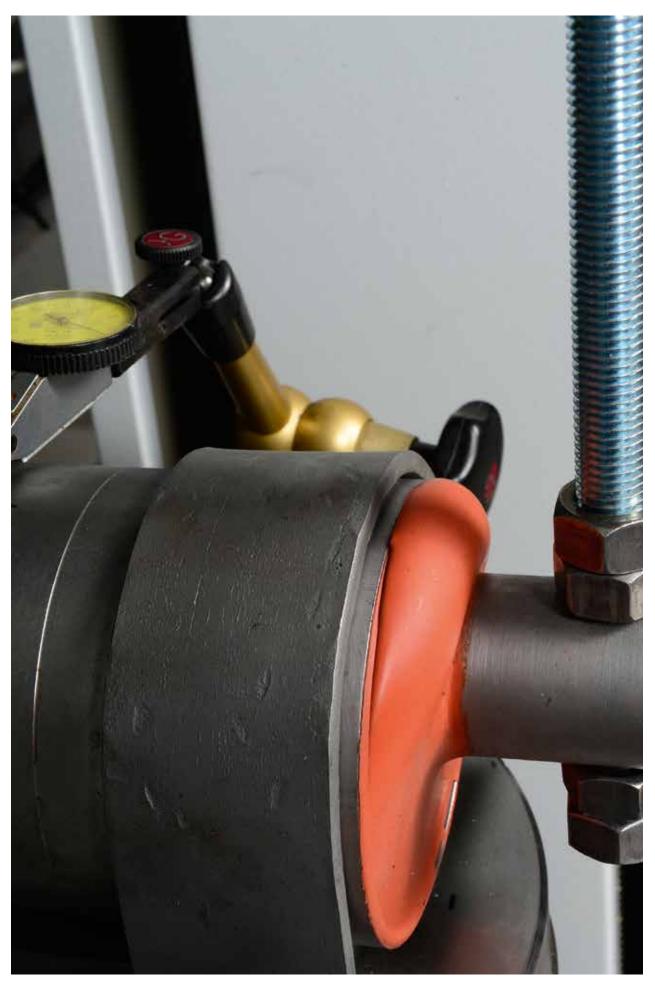
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Movement fully downwards. Due to the bulging of the sealant layer over the edge of the conduit sleeve a rupture is visible. However, it is not a full loss of adhesion of the sealant layer.

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On top compression, at the bottom stretch. Total displacement 20 mm. Initially 60 cycles have been exposed to the sealing system. Exposure at 7 different speeds have been investigated.

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Test set-up for linear movement of the ducted pipe.



Movement of 30 mm. Stretch of the layer 141% = ( $\sqrt{3^2+3^2}$ ):3



Movement of 40 mm. Stretch of the layer 167% =  $(\sqrt{3^2+4^2}):3$ 



Movement of 50 mm. Stretch of the layer 194% = ( $\sqrt{3^2+5^2}$ ):3.