



Offer Nr / Teklif No
19-IS-0286b-34-B

TGK Order Nr / Sipariş No
712920116

Register Nr / Kayıt No
19 - IR - 0611

Inspection Report **Muayene Raporu**

No. 19-IS-0286b-34-B-001 Rev. 00

HIGH-PRESSURE JETTING RESISTANCE TEST ACCORDING TO DIN 19523 - PRACTICAL TEST

This is to certify that the components as described here under have been inspected. Burada tanımlanan malzemelerin muayenelerinin yapıldığı belgelenmiştir.

Client/Müşteri : SUBOR BORU SAN. VE TİC. A.Ş.
Ahmetler Mahallesi, Şehit Mustafa Geyve Caddesi, No:15,
54430, Karapürçek / Sakarya / Türkiye

Project Name/Projenin Adı : High-pressure jetting resistance test according to DIN 19523
- practical test

Client's P.O. No./Contract No. : Signed order dated 18.04.2019
Müşteri Sip. No./ Sözleşme No

Manufacturer/İmalatçı : SUBOR BORU SAN. VE TİC. A.Ş.

Place of Inspection/ Muayene Yeri : SUBOR BORU SAN. VE TİC. A.Ş., Karapürçek / Sakarya

Date/Duration of Inspection : 30.04.2019 - 1 day
Muayene Tarihi ve Süresi

Inspector's Name/ Denetçi Adı : Ayşegül Alkan

Date of Report Issued/Raporun Yayın Tarihi : 24.05.2019

Inspection Report No. 19-IS-0286b-34-B-001 **Rev.** 00
Denetim Raporu No

The following materials were inspected / Aşağıdaki malzemeler muayene edilmiştir:

DN 300 PN 1 SN 10000 Glassfiber Reinforced Polyester Pipe

Base of Inspection / Muayenenin Esası :

<u>Applicable Specification / Uygulanan Spesifikasyonlar</u>	<u>Rev.</u>	<u>Dated/Tarih</u>
- DIN 19523	-	08.2008

Supplier Documents / Tedarikçi Dökümanları

- N/A

Inspection Documents / Muayene Dökümanları:

Add items and rows as required. / İhtiyaca göre ilave madde ve satır ekleyiniz.

acc. to/göre

Clients – Purchase Order dated / tarihli 18.04.2019

TÜV's Scope of Inspection / TÜV Denetim Kapsamı dated / tarihli

ITP Plan No. Rev. dated / tarihli

Scope of Inspection / Muayene Kapsamı

If there exist insert the check list/items here / Varsa kontrol listesi/maddeleri buraya ekleyiniz.

The high-pressure water jetting resistance test was carried out by the company Subor Boru San. ve Tic. A.Ş. according to DIN 19523 on 30th April 2019 at the manufacturing site in Sakarya-Karapürçek.

The purpose of the test method 'practical test' according to DIN 19523 is to simulate the effect of high pressure cleaning on drains and sewers considering the mechanical loads during the test resulted from the high water jet itself and additionally the weight of the nozzle and hose.

The „material test“ – also described in DIN 19523 - was not part of this inspection.

Inspection Report No. 19-IS-0286b-34-B-001 **Rev.** 00
Denetim Raporu No

1.) Identification of the test pieces:

Description of the pipe:

Producer	Subor Boru San. ve Tic. A.Ş.
Product name	Glassfiber Reinforced Polyester Pipe
Intended use	Sewer pipe
Diameter	DN 300
Length	18 m
Wall thickness	7,3 mm

2.) Execution – ‘practical test’:

The test pipes were visually inspected prior to testing and no imperfections were detected. So the test pipes were released to be tested.

The test-route consisted of whole pipes and fittings. It was placed straight and in a stable position and had a length of 18 meters (see photo 1).

The nozzle was driven to the end of the test section and then retracted immediately to the beginning of the test section (one cycle). The test consisted of 60 cycles.

The test was carried out under consideration of the parameters described below.

Requirements in accordance with DIN 19523:

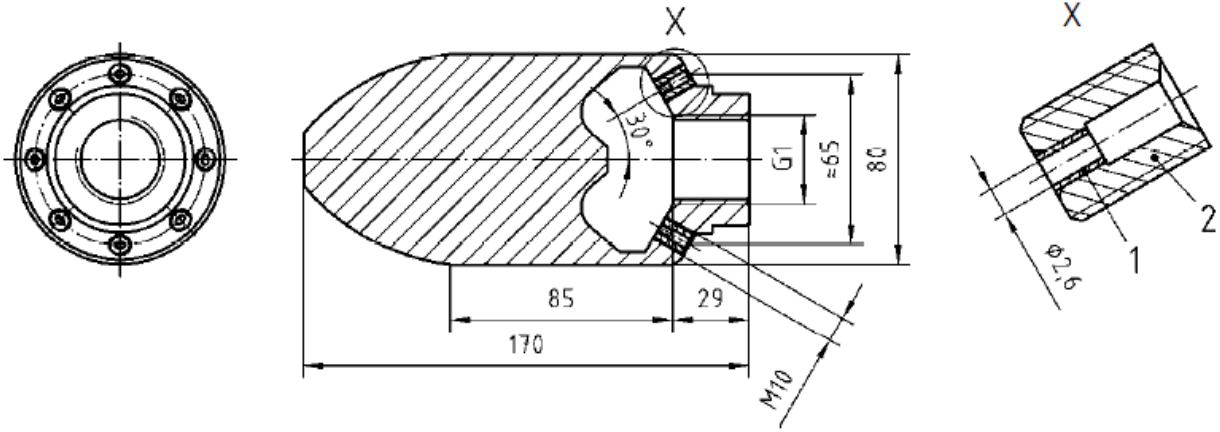
Water quality	Drinking water
Water temperature ambient air temperature	(15 ±10)°C
Power density Dj	(330 ± 15) W/mm ²
Nozzle	Standard nozzle (see fig.1)
Angle of water spread α	(30 ± 1)°
Amount of nozzle-inserts	8
Orifice diameter	(2.60 ± 0.02) mm
Test route (pipe length)	min.15 m
Velocity of travel – forwards	(1.0 ± 0.1) m/s
Velocity of travel –backwards	(0.1± 0.02) m/s
Testing procedure	60 test cycles

Inspection Report No.
Denetim Raporu No

19-IS-0286b-34-B-001

Rev. 00

Properties of the nozzle body according to DIN 19523:



Parameter	Value
Length of nozzle	(17 ± 0,5) cm
Weight of nozzle	(4,5 ± 0,1) kg
Diameter of nozzle	(8 ± 0,5) cm

Fig.1 standard nozzle for the practical test

Inspection Details / Muayene Detayları:

Participants/Katılanlar:		
No	Names/Adlar	Company-Organization/Şirket-Organizasyon
1	Cumhur Cihat KILIÇ	SUBOR
2	Ayşegül ALKAN	TÜV SÜD

Activity No Aktivite No	Results and comments related to inspections Muayene sonuçları ve görüşler	Note Not
	- After testing the pipes were visually inspected and no damages were detected.	



Inspection Report No.
Denetim Raporu No

19-IS-0286b-34-B-001

Rev. 00

Use the applicable items of the below section / Aşağıdaki kısımda uygun maddeleri kullanın

Result of Inspection:
Muayene Sonucu

- | | | | |
|-------------------------------------|--|--------------------------|--------------------|
| <input checked="" type="checkbox"/> | accepted / kabul | <input type="checkbox"/> | rejected / red |
| <input type="checkbox"/> | accepted with comments / yorumlarla birlikte kabul | <input type="checkbox"/> | partially / kısmen |
| <input type="checkbox"/> | fully / tamamen | <input type="checkbox"/> | |

Status of Items (acc. to P.O.):
Durum (siparişe göre)

- | | | | |
|-------------------------------------|---|--------------------------|--|
| <input checked="" type="checkbox"/> | complete / tamam | <input type="checkbox"/> | not complete / tamam değil |
| <input type="checkbox"/> | released for export packing
ihracat paketlemesi için serbest | <input type="checkbox"/> | ready for shipment
nakliye için hazır |

Purchase Order Status:
Sipariş Emrinin Durumu

- | | | | |
|-------------------------------------|-----------------|--------------------------|----------------------------|
| <input checked="" type="checkbox"/> | complete /tamam | <input type="checkbox"/> | not complete / tamam değil |
|-------------------------------------|-----------------|--------------------------|----------------------------|

Further Inspections:
Sonraki Muayeneler

- | | | | |
|--------------------------|---------------------------------------|-------------------------------------|------------|
| <input type="checkbox"/> | yes, probably on:
evet, muhtemelen | <input checked="" type="checkbox"/> | no / hayır |
|--------------------------|---------------------------------------|-------------------------------------|------------|

Attachments / Ekler:

- Test report (Labor test results of the tested pipe samples) prepared by Subor Boru San. ve Tic. A.Ş.

Associated Documents / İlgili Dökümanlar:

- DIN EN 19523

Inspection Report No.
Denetim Raporu No

19-IS-0286b-34-B-001

Rev. 00

Photographs / Fotoğraflar



Photo 1 – test-route while testing

Inspection Report No.
Denetim Raporu No

19-IS-0286b-34-B-001

Rev. 00



Photo 2 – pipe bottom after test

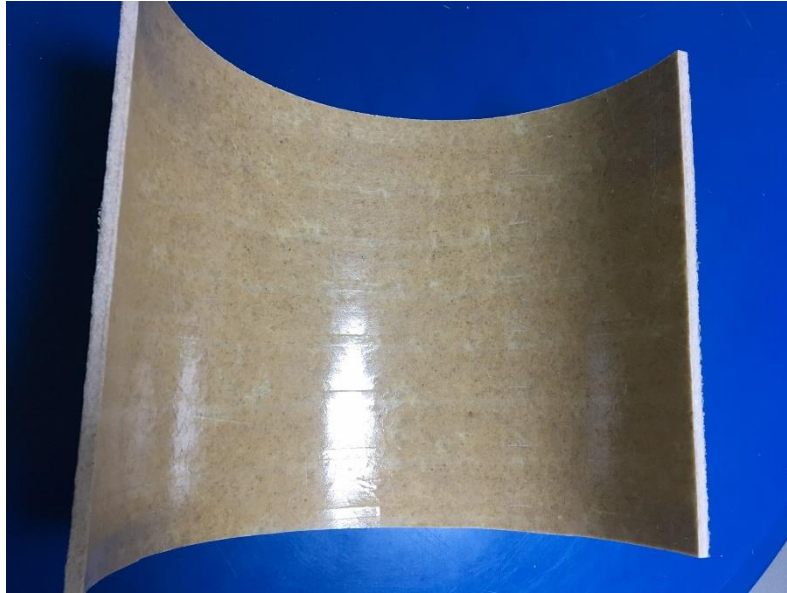


Photo 3 – cutted test piece for the labor

Place, Date / Yer, Tarih
Sakarya / 30.04.2019

Inspector to TÜV SÜD / TÜV SÜD Denetçisi
Ayşegül Alkan