

Inspection Report Muayene Raporu

Report / Rapor No : 25-IS-0083-34-T-001

Rev. 00

Offer Nr / Teklif No : 25-IS-0083-34-T

TGK Order Nr / Sipariş No : 712926659

Register Nr / Kayıt No : 25-SCR-0156

Type of Inspection / Muayene Tipi

In-Progress / Devam Eden ☐ Final / Son ☒

WITNESS INSPECTION

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 Tic. A.Ş.

Project Name
Projenin Adı : Subor Biaxial SSB Design Test

Client's P.O. No. / Contract No.
Müşteri Sipariş No. / Sözleşme No : -

Supplier
Tedarikçi : -

Manufacturer
İmalatçı : Subor Boru San. ve Tic. A.Ş.

Place of Inspection
Muayene Yeri : Ahmetler Mahallesi, Şehit Mustafa Geyve Caddesi, No:15, 54430,
Karapürçek / Sakarya / Türkiye

Date and Duration of Inspection
Muayene Tarihi ve Süresi : 20.-29.05.2025

Inspector's Name
Denetçi Adı : Ayşegül ALKAN

Date of Report Issued
Raporun Yayın Tarihi : 04.06.2025

1. Inspected Items / Muayene Edilenler

1.1. DN700 PN10 SN10000 Glassfiber Reinforced Polyester Pipe - Biaxial SSB Design

Coupling Serial No: E2425655CA , Length: 440 mm

Pipe Serial No: E2425591PA, E2425591PB , Total Length: 4200 mm

2. Drawings, Codes, Standards, Procedures, Specifications & Applicable References

Resimler, Kodlar, Standartlar, Prosedürler, Şartnameler ve Uygulanabilir Referanslar

Reference / Referans	Rev.	Title / Başlık	Status / Durum
ISO 7432	2021	Glass-reinforced thermosetting plastics (GRP) pipes and fittings — Test methods to prove the design of locked socket-and-spigot joints, including double-socket joints, with elastomeric seals	Active
ASTM D4161-14	2019	Standard Specification for "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe Joints Using Flexible Elastomeric Seals ¹	Active

3. Scope of Inspection / Muayene Kapsamı

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

Biaxial SSB Design Test

- 3.1. Negative pressure acc. to ISO 7432 Clause 9.2
- 3.2. Deformation with internal / cyclic pressure and end thrust acc. to ISO 7432 Clause 9.3 & 9.4
- 3.3. Method A - Resistance to bending with pressure and end thrust acc. to ISO 7432 Clause 9.5
- 3.4. Resistance to maintained internal pressure and end thrust acc. to ISO 7432 Clause 9.6
- 3.5. Hydrostatic pressure test acc. to ASTM D4161-14 R19
- 3.6. External pressure test acc. to ASTM D4161-14 R19

4. Inspection Details / Muayene Detayları

4.1. Participants / Katılanlar:

No	Names / Adlar	Company-Organization / Şirket-Organizasyon
1	Cihan CÖMERT	SUBOR
2	Selin DELİBAŞ	SUBOR
3	Ayşegül ALKAN	TÜV SÜD TGK

4.2. Results and comments related to inspections / Muayene sonuçları ve görüşler

Activity No Aktivite No	Notes / Notlar	Reference Referans
3.1	ISO 7432 Clause 9.2 Negative pressure	Photos (1)

	For the Negative Pressure the vacuum inside was created by an external pump connected to the pipe. A negative pressure of at least -0,8 bar was applied for 1 hour. Then the pressure was returned to atmospheric pressure. No pressure increase, leakage or damage was detected.	
3.2	ISO 7432 Clause 9.3 & 9.4 Deformation with internal / cyclic pressure and end thrust A load of 1.560 kg (deformation force F) has been applied near the coupling. Initial pressure: The test specimen was filled with water and pressurized up to min.15 bar and hold for 15 minutes. Positive Static pressure: The test specimen was filled with water and pressurized up to min.20 bar and hold for 24 hours. A load of 1.680 kg (deformation force F) has been applied near the coupling. Positive cyclic pressure: The test specimen was pressurized from 0 to 15 bar in a period of 1,5 min. to 3 minutes. The pressure was reduced to atmospheric pressure and then raised again up to 15 bar. This cycle has been repeated for 10 times. No pressure drop, leakage or damage was detected.	Photos (2)
3.3	ISO 7432 Clause 9.5 Method A Resistance to bending with pressure and end thrust A load of 4.480 kg (deformation force F) has been applied on the coupling. Initial pressure: The test specimen was filled with water and pressurized up to min.15 bar and hold for 15 minutes. Positive Static pressure: The test specimen was filled with water and pressurized up to min.20 bar and hold for 24 hours. No pressure drop, leakage or damage was detected.	Photos (3)
3.4	ISO 7432 Clause 9.6 Resistance to maintained internal pressure and end thrust Positive static pressure, durability test: The test specimen was filled with water and pressurized up to min.25 bar and hold for 100 hours. No pressure drop, leakage or damage was detected.	Photos (4)
3.5	ASTM D4161 Clause 7.3 Hydrostatic Test in Shear Loading Position A load of 1.400 kg (deformation force F) has been applied near the coupling with a distance of 300 mm and the test specimen was pressurized up to min.20 bar and hold for 10 minutes. No pressure drop, leakage or damage was detected.	
3.6	ASTM D4161 Clause 7.4 External Pressure Test	Photos (5)

	A load of 1.620 kg (deformation force F) has been applied on the coupling and a negative pressure of at least -0,8 bar was applied for 40 min. A load of 1.560 kg (deformation force F) has been applied near (distance of 300 mm) the coupling and a negative pressure of at least -0,8 bar was applied for 40 min. No pressure increase, leakage or damage was detected.	
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4.3. Status of Non-Conformities / Uygunsuzlukların Durumu

NCR No	Description of non-conformity Uygunsuzluk Tanımı	Status Durum	Closed (yes/no) Kapandı (e/h)
-	-	-	-

5. Final Notes / Final Notlar

Result of Inspection: Muayene Sonucu	☒ accepted / kabul	☐ rejected / ret
Status of Items (acc. to P.O.): Durum (siparişe göre)	☒ complete / tamam ☐ released for export packing ihracat paketlemesi için serbest	☐ not complete / tamam değil ☐ ready for shipment nakliye için hazır
Purchase Order Status: Sipariş Emrinin Durumu	☒ complete / tamam	☐ not complete / tamam değil
Further Inspections: Sonraki Muayeneler	☒ no / hayır	☐ yes, probably on: evet, muhtemelen

6. Attachments / Ekler

6.1. Calibration Certificates

7. Photographs, Pictures, Drawings / Fotoğraflar, Resimler, Çizimler



Photos 1 : Negative pressure test



Photos 2 : Deformation with internal / cyclic pressure and end thrust



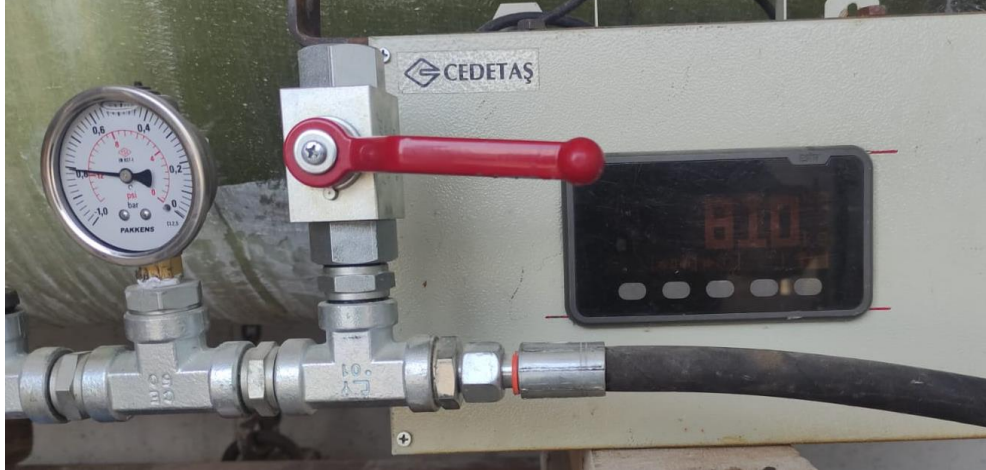
Photos 3 : Method A Resistance to bending with pressure and end thrust



Photos 4 : Resistance to maintained internal pressure and end thrust



Photos 5 : Hydrostatic Test in Shear Loading Position





Photos 6 : External Pressure Test

8. Release of the report / Raporun yayınlanması

Place, Date / Yer, Tarih

Inspector to TÜV SÜD / TÜV SÜD Muayene Personeli

Istanbul, 04.06.2025

Ayşegül ALKAN

Sign and Stamp

It is endorsed that the report regarding the inspection performed can be issued and released.
Yapılan denetime ilişkin raporun düzenlenerek yayınlanabileceği onaylandı.

Place, Date / Yer, Tarih

Released by / Yayınlayan

Istanbul, 04.06.2025

Mustafa ÖRMECİ



Sign and Stamp