# Quality Control

## Project Information

| | |
|---|---|
| Project Name: | TON104113 |
| Project Number: | Oseberg Flowloops |
| Client: | Aker Solutions |
| ITP Document Number: | No ITP requested. TON Standards. |
| Project Manager: | Tom Alexander Hansen |
| Supervisor: | Knut Arild Nilsen |
| Lead Engineer: | Oscar Rodriguez |
| Supervising Engineer: | Nils Storaunet |
| Quality Control: | Ingrid Thomasgård |
| Geometry: | Coated Item |
| Description: | Flowloop #1 |
| Item Number: | T-182-P460 |
| IFS Activity Code: | 10 |
| CPS: | 1157 |

## Steel Preparation

| | |
|---|---|
| Relative Humidity: | 60.0% |
| Air Temperature: | 20.0°C |
| Steel Temperature: | 20.0°C |
| Dew Point: | 9.0°C |
| Over Dew Point: | 9.0°C |
| Equipment ID: | 123 |
| Next Calibration Date: | 02.09.2019 |
| Employee ID: | admin |
| | |
| Ins. of Steel Surface: | |
| Employee ID: | admin |
| | |
| Roughness: | 60.0µm |
| Equipment ID: | 12 |
| Next Calibration Date: | 10.09.2019 |
| Employee ID: | admin |
| | |
| Surface Cleanliness: | 2.5Sa |
| Employee ID: | admin |
| | |
| Primer 1: | Chemosil 211 |
| Batch Number: | 1111 |
| Start Time: | 02.09.2019 - 09:08 |
| Stop Time: | 02.09.2019 - 09:08 |
| Employee ID: | admin |
| | |
| Primer 2: | Chemosil 231 |
| Batch Number: | 112211 |
| Start Time: | 02.09.2019 - 09:09 |
| Stop Time: | 02.09.2019 - 09:09 |
| Employee ID: | admin |
| | |
| Rubber Cement: | None |

## Coating and Vulcanization

| | |
|---|---|
| Actual Steel OD: | 158.0mm |
| | |
| Rubber Cement / Release Agent 1: | 75147 |
| Mix Date(s) 1: | Aug. 26, 2019 |
| | |
| Rubber Cement / Release Agent 2: | 75051 |

Repair

Mix Date(s) 2: Aug. 27, 2019

## Lead Engineer's Specifications

| Layer | Compound Number | Actual Thickness | Shrink | Proposed Thickness | Cumulative Thickness |
|---|---|---|---|---|---|
| 1 | 73961 | 4.0mm | 7.0% | 4.3mm | 166.6mm |
| 2 | 76159 | 21.0mm | 7.0% | 22.5mm | 211.5mm |
| 3 | 76159 | 21.0mm | 7.0% | 22.5mm | 256.4mm |
| 4 | 73780 | 4.0mm | 7.0% | 4.3mm | 265.0mm |

## Layer 1

Thickness: 4.5mm
Mix Date: 26.08.2019
Measurement Point 1: 167.0mm
Measurement Point 2: 167.0mm
Measurement Point 3: 167.0mm
Measurement Point 4: 167.0mm
Employee ID: admin

## Layer 2

Thickness: 22.0mm
Mix Date: 24.09.2019
Measurement Point 1: 211.0mm
Measurement Point 2: 211.0mm
Measurement Point 3: 212.0mm
Measurement Point 4: 213.0mm
Employee ID: admin

## Layer 3

Thickness: 4.3mm
Mix Date: 02.09.2019
Measurement Point 1: 257.0mm
Measurement Point 2: 258.0mm
Measurement Point 3: 258.0mm
Measurement Point 4: 259.0mm
Employee ID: admin

## Layer 4

Thickness: 4.0mm
Mix Date: 02.09.2019
Measurement Point 1: 265.0mm
Measurement Point 2: 265.0mm
Measurement Point 3: 265.0mm
Measurement Point 4: 265.0mm
Employee ID: admin

## Vulcanization Step 1 of 1

Vulc. Options: Steam Autoclave
Program Number: 3
Autoclave Number: 2
Start Time: 02.09.2019 - 09:16
Stop Time: 02.09.2019 - 09:17
Employee ID: admin

Touch-Up: Performed
Date and Time: Sept. 2, 2019, 9:17 a.m.
Employee ID: admin

# Final Inspection

## Measurement Points

Measurement Point 1 mm
Measurement Point 2 mm
Measurement Point 3 mm
Measurement Point 4 mm

Should be between 258.0mm and 278.0mm

Repair

- [ ] Total OD (Pi-tape)

APS. Final measurments are within tolerances.

- [ ] Visual Inspection

APS Repair Procedure. Free from defects. Cosmetic defects may be accepted.

- [ ] Hammer Test

TR 2028. No change in audible pitch.

### Hardness of Outer Layer

Shore A

Minimum 57Shore A

### Comment

Save and Continue



Repair