

Weld inspections. ME 3 & SE

3. .

DATE, 08/10/11.

Following the successful removal of the South Main Tower expansion joint plates ME3 & SE3, weld inspections were required to be carried out on randomly selected welds on both plates.

Prior to commencement of weld testing procedure, assistance was required to remove excessive paint protection from the welds selected for inspection. Heat treatment was applied and all paint removed. This ensured that an accurate method of inspection could be carried out as required.

Plate ME 3. <u>Four in No locations</u> were randomly selected. Photographs & information recorded below, with recorded Liquid penetration inspection records.

Plate SE. 3. <u>Three in No locations</u> were randomly selected. Photographs & information recorded below , with recorded Liquid penetration inspection records.

British Standards.:

Visual testing. : BS EN 13018. : 2001.

Penetrant testing of welds. Acceptance levels. BS EN 1289.: 1998.

It should be recorded that time restraints were placed on the amount of inspections and related information recorded due to event sequences, consultant inspections, remedial works and inclement weather. Following concerns, consultation with the maintenance manager was taken and following brief discussions, an agreement was reached and instruction was given to gather what relevant information that could be taken in the time possible.

It should be recorded that also that additional 10 mm packer plates were fitted behind support bearing block to remove deference of levels of ME3 tongue plate end and adjacent bitumen plate.





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Weld inspection (Photographs). M/E 3.

ME3 DEMAG POS. 7 INT GUIDE BLOCK WAS ALSO TESTED VISUALLY & LPI. No photograph taken. (INCLEMENT WEATHER) HEAVY RAIN



ME3 END BEARING BLOCK ON TONGUE PLATE (E) CLEANED.





ME3 END BEARING BLOCK ON ROCKER PLATE (E) SHOWING WELDS CLEANED & TESTED.



ME3 DEMAG POS. 14 INT GUIDE BLOCK W SHOWING WELDS TESTED & INSPECTED

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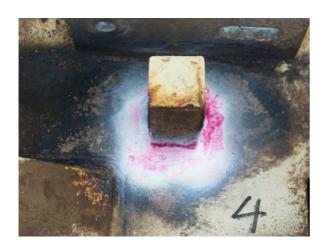
Weld inspections. ME 3 & SE

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Weld inspections . (Photographs) S/E 3.



SE3. END BEARING BLOCK ON ROCKER PLATE (E) TESTED & INSPECTED



SE3. DEMAG POS. 4 INT GUIDE BLOCK TESTED & INSPECTED



SE3. END BEARING BLOCK ON TONGUE PLATE (E) TESTED & INSPECTED



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3. .

DATE. 08/10/11.



FORTH ESTUARY TRANSPORT AUTHORITY

| L.P.I. WELD INSPECTION REPORT | | | | |
|--|--|------------|---------------------------------|--|
| Technician:. | Inspection Qualification: Date. 08/1 | | 0/11 | |
| Signature: | P.C.N. LEVEL 2 | | | |
| Work Pack .: N/A | Drg No. : N/A | DEMAG P | Part. ME3 POS. 7 INT LOCK | |
| Inspection Document Conforming 1 Additional Info see FETA WP 15 & | | 1289:1998. | | |
| Acceptance Standard: | BSEN 1289: 1998 | | | |
| Acceptance Level:(Highlighted) | 1 2 | 3 | 3 | |
| Area Examined:(BSEN571-1) | Welds & Heat Affected Zone | 1 | | |
| Process Type(Highlighted) | Fluorescent Colour Contrast Combined | | | |
| Type/Make of Consumables: | Rocol Flaw: Cleaner, Penetrant, Developer | | | |
| Method of Application: | Spraying/Brushing | | | |
| Penetration Time: | 20mins to 30mins | | | |
| Development Time: | 15mins | | | |
| Surface Condition: | As Welded Dressed | | | |
| Surface Preparation: | Dry & free of all dirt, grease, scale, spatter, oil etc. | | | |
| Illumination: | Natural Auxiliary | | | |
| Fabrication Stage: | Fabrication Complete. | | | |
| Purpose of Test: | To find all surface breaking defects/ indications. | | | |
| Name of Welder: N/A | I.D. No: N/A | | Results: | |
| Comments: Inspection of existing | Accept | | | |
| penetrant testing as specified to British standards : BS EN 13018.: 2001 BS EN 1289.: 1998. These tests were carried out determine if any NEW | | | | |
| defects have appeared, other than any old defects. No new defects found. | | | YES | |
| Only defects to be found were original: small indications of defects. | | | | |
| No new defects found. | | | <u>Reject:</u> | |

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DATE. 08/10/11.



| L.P.I. WELD INSPECTION REPORT | | | | |
|---|--|-----------|---------------------------------------|-------------------|
| Technician:. | Inspection Qualification | ation: | Date. 08/10 |)/11 |
| Signature: | P.C.N. LEVEL 2 | | | |
| Work Pack . : N/A | Drg No. : N/A | | Inspection I DEMAG PO GUIDE BLO | OS. 14 INT OCK |
| Inspection Document Conforming To Info see FETA WP 15 &16 | BSEN 571-1:1997& I | BSEN128 | 39:1998. | Additional |
| Acceptance Standard: | BSEN 1289: 1998 | | | |
| Acceptance Level:(Highlighted) | 1 | 2 | 3 | |
| Area Examined:(BSEN571-1) | Welds & Heat Affe | cted Zone | Э | |
| Process Type(Highlighted) | Fluorescent Combined | Co | lour Contrast | |
| Type/Make of Consumables: | Rocol Flaw: Cleane | er, Penet | rant, Developer | |
| Method of Application: | Spraying/Brushing | | | |
| Penetration Time: | 20mins to 30mins | | | |
| Development Time: | 15mins | | | |
| Surface Condition: | As Welded | | Dressed | |
| Surface Preparation: | Dry & free of all dirt, grease, scale, spatter, oil etc. | | | il etc. |
| Illumination: | Natural Auxiliary | | | |
| Fabrication Stage: | Fabrication Comple | | - 1 | |
| Purpose of Test: | To find all surface breaking defects/ indications. | | | |
| Name of Welder: N/A | I.D. No: N/ | Ά | | Results: |
| <u>Comments:</u> Inspection of existing welds by Visual testing and Liquid penetrant testing as specified to British standards : BS EN 13018.: 2001 BS EN 1289.: 1998. These tests were carried out determine if any <u>NEW</u> defects have appeared, other than any old defects. No new defects found. Only defects to be found were original: small indications of defects. No new defects found. | | | Accept: YES Reject: | |



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| L.P.I. WELD INSPECTION REPORT | | | | |
|---|--|---------------------|--------------------------|--------------------------------|
| Technician: | | tion Qualification: | Date. 08/1 | 0/11 |
| Signature: | | . LEVEL 2 | | |
| Work Pack . : N/A | | o. : N/A | BEARING BLO PLATE (E) | Part. ME3 END OCK ON ROCKER |
| Inspection Document Conforming Additional Info see FETA WP 15 & | | N 571-1:1997& BSI | EN1289:1998. | |
| Acceptance Standard: | BSEN | 1289: 1998 | | |
| Acceptance Level:(Highlighted) | | 1 | <mark>2</mark> | 3 |
| Area Examined:(BSEN571-1) | Welds | & Heat Affected Zo | one | |
| Process Type(Highlighted) | Fluore | | Colour Contra | st |
| Type/Make of Consumables: | Rocol Flaw: Cleaner, Penetrant, Developer | | | |
| Method of Application: | Spraying/Brushing | | | |
| Penetration Time: | 20mins to 30mins | | | |
| Development Time: | 15mins | | | |
| Surface Condition: | As Welded Dressed | | | |
| Surface Preparation: | Dry & free of all dirt, grease, scale, spatter, oil etc. | | | |
| Illumination: | Natural Auxiliary | | | |
| Fabrication Stage: | | ation Complete. | | |
| Purpose of Test: | To find all surface breaking defects/ indications. | | | ations. |
| Name of Welder: N/A | | I.D. N/A | | Results: |
| Comments: Inspection of existing welds by Visual testing and Liquid penetrant testing as specified to British standards: BS EN 13018.: 2001 BS EN 1289.: 1998. These tests were carried out determine if any NEW defects have appeared, other than any old defects. No new defects found. Only defects to be found were original: small indications of defects. No new defects found. | | | Accept: YES Reject: | |



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| L.P.I. WELD INSPECTION REPORT | | | | |
|---|--|--------------------------|--------------------------------|--|
| Technician: | Inspection Qualification: | Date. 08/1 | 0/11 | |
| Signature: | P.C.N. LEVEL 2 | | | |
| Work Pack . : N/A | Drg No. : N/A | BEARING BLC PLATE (E) | Part. ME3 END OCK ON TONGUE | |
| Inspection Document Conforming Additional Info see FETA WP 15 & | | EN1289:1998. | | |
| Acceptance Standard: | BSEN 1289: 1998 | | | |
| Acceptance Level:(Highlighted) | 1 | <mark>2</mark> | 3 | |
| Area Examined:(BSEN571-1) | Welds & Heat Affected Zo | one | | |
| Process Type(Highlighted) | Fluorescent Combined | Colour Contra | st | |
| Type/Make of Consumables: | Rocol Flaw: Cleaner, Pen | etrant, Develop | er | |
| Method of Application: | Spraying/Brushing | | | |
| Penetration Time: | 20mins to 30mins | | | |
| Development Time: | 15mins | | | |
| Surface Condition: | As Welded | Dressed | | |
| Surface Preparation: | Dry & free of all dirt, grease, scale, spatter, oil etc. | | | |
| Illumination: | Natural | Auxiliary | | |
| Fabrication Stage: | Fabrication Complete. | | | |
| Purpose of Test: | To find all surface breaking | ng defects/ indic | ations. | |
| Name of Welder: N/A | I.D. No: N/A | | Results: | |
| Comments: Inspection of existing welds by Visual testing and Liquid | | | | |
| penetrant testing as specified to B | | | Accept: | |
| BS EN 1289.: 1998. These tests wer | | | VEC | |
| defects have appeared, other than Only defects to be found were orig | | | YES | |
| No new defects found. | a s.rian maioanono or do | | Reject: | |
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| L.P.I. WELD INSPECTION REPORT | | | | |
|---|--|-------------------------|-----------------------------------|--|
| Technician:. Signature: | Inspection Qualification: Date. 08/ P.C.N. LEVEL 2 | | 10/11 | |
| Work Pack . : N/A | Drg No. : N/A | BEARING BL PLATE (E) | n Part. se3. end ock on tongue | |
| Inspection Document Conforming Additional Info see FETA WP 15 8 | | :N1289:1998. | | |
| Acceptance Standard: | BSEN 1289: 1998 | | | |
| Acceptance Level:(Highlighted) | 1 | <mark>2</mark> | 3 | |
| Area Examined:(BSEN571-1) | Welds & Heat Affected Zor | ne | | |
| Process Type(Highlighted) | Fluorescent Combined | Colour Contra | st | |
| Type/Make of Consumables: | Rocol Flaw: Cleaner, Penetrant, Developer | | | |
| Method of Application: | Spraying/Brushing | | | |
| Penetration Time: | 20mins to 30mins | | | |
| Development Time: | 15mins | | | |
| Surface Condition: | As Welded Dressed | | | |
| Surface Preparation: | Dry & free of all dirt, grease, scale, spatter, oil etc. | | | |
| Illumination: | Natural Auxiliary | | | |
| Fabrication Stage: | Fabrication Complete. | - 1 | | |
| Purpose of Test: | To find all surface breaking | g defects/ indic | ations. | |
| Name of Welder: N/A | I.D. No: N/A | | Results: | |
| Comments: Inspection of existing welds by Visual testing and Liquid penetrant testing as specified to British standards: BS EN 13018.: 2001 BS EN 1289.: 1998. These tests were carried out determine if any NEW defects have appeared, other than any old defects. No new defects found. Only defects to be found were original: small indications of defects. No new defects found. | | | Accept: YES Reject: | |



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DATE, 08/10/11.



L.P.I. WELD INSPECTION REPORT Inspection Qualification: Date. 08/10/11 Technician:. Signature: P.C.N. LEVEL 2 Work Pack . : N/A Drg No.: N/A Inspection Part. se3. END **BEARING BLOCK ON ROCKER** PLATE (E) Inspection Document Conforming To BSEN 571-1:1997& BSEN1289:1998. Additional Info see FETA WP 15 &16 Acceptance Standard: BSEN 1289: 1998 Acceptance 1 2 3 Level:(Highlighted) Welds & Heat Affected Zone Area Examined:(BSEN571-1) Process Type(Highlighted) **Fluorescent Colour Contrast** Combined Type/Make of Consumables: Rocol Flaw: Cleaner, Penetrant, Developer Method of Application: Spraying/Brushing Penetration Time: 20mins to 30mins **Development Time:** 15mins Surface Condition: As Welded Dressed Surface Preparation: Dry & free of all dirt, grease, scale, spatter, oil etc. Illumination: **Natural** Auxiliary Fabrication Stage: Fabrication Complete. Purpose of Test: To find all surface breaking defects/ indications. Name of Welder: N/A I.D. No: **N/A** Results: Comments: Inspection of existing welds by Visual testing and Liquid penetrant testing as specified to British standards: BS EN 13018.: 2001.. BS Accept: EN 1289.: 1998. These tests were carried out determine if any **NEW** defects have appeared, other than any old defects. No new defects found. YES Only defects to be found were original: small indications of defects. No new defects found. Reject:



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|--|--|-----------------------|------------------------------------|--|
| Technician: | Inspection Qualification: | Date. 08 | 3/10/11 | |
| Signature: | P.C.N. LEVEL 2 | | | |
| Work Pack . : N/A | Drg No. : N/A | Inspection Pos. 4 INT | on Part. se3. demag guide block | |
| Inspection Document Conforming 1 Info see FETA WP 15 &16 | To BSEN 571-1:1997& BSEN128 | 9:1998. | Additional | |
| Acceptance Standard: | BSEN 1289: 1998 | | | |
| Acceptance Level:(Highlighted) | 1 2 | | 3 | |
| (3 3 11) | | | 3 | |
| Area Examined:(BSEN571-1) | Welds & Heat Affected Zone | | | |
| Process Type(Highlighted) | Fluorescent Colou Combined | r Contrast | | |
| Type/Make of Consumables: | Rocol Flaw: Cleaner, Penetrant | , Developer | | |
| Method of Application: | Spraying/ <mark>Brushing</mark> | | | |
| Penetration Time: | 20mins to 30mins | | | |
| Development Time: | 15mins | | | |
| Surface Condition: | As Welded Dressed | | | |
| Surface Preparation: | Dry & free of all dirt, grease, scale, spatter, oil etc. | | | |
| Illumination: | Natural | Auxiliary | | |
| Fabrication Stage: | Fabrication Complete. | | | |
| Purpose of Test: | To find all surface breaking defects/ indications. | | | |
| Name of Welder: N/A | I.D. No: N/A | | Results: | |
| Comments: Inspection of existing | | | Δ . | |
| testing as specified to British standards: BS EN 13018.: 2001 BS EN 1289.: | | | Accept: | |
| 1998 . These tests were carried out determine if any NEW defects have appeared, other than any old defects. No new defects found. | | | YES | |
| Only defects to be found were original: small indications of defects. No new | | | TES | |
| defects found. | | | Reject: | |
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