# INSPECTION REPORT



| EVO Job No: 68931-5 | Report No: IR-02 | Date of Report: 01 May, 2020 | Customer : **BHP Olympic Dam** |
|---|---|---|---|

## CUSTOMER DATA

| | | | |
|---|---|---|---|
| Name:<br>Address: | **BHP Olympic Dam**<br>Olympic Dam SA 5725 | | |
| Attn: | Murray McC | Phone: | XXXX XXX XXX |
| E-Mail : | admin@material.com | | |
| Copies to: | | | |

## PDT DATA

| | |
|---|---|
| Project – Assignment No. | 68931-5 |
| Client P.O./I.O. to Omni-tuff: | 4508631918 |
| Requisition No: | NA |
| Date of Order: | 20 April, 2020 |
| Inspection Contract Coordinator: | Martin Smith |

## SUPPLIER/SUB-SUPPLIER DATA

Inspection Performed: ☒ With Customer ☐ With Contractor

| | | | |
|---|---|---|---|
| Relevant OEMs or Vendors | Rossi Gearmotors | | |
| | | | |
| | | | |
| Primary Contact: | Cornelius Castle | | |
| Phone: | | E-mail : | |
| Sub-supplier: | NA | | |
| Sub-Supplier Job No: | NA | | |
| Location: | NA | | |
| Primary Contact: | NA | | |
| Phone: | NA | E-mail : | NA |

## INSPECTION INFORMATION

| | |
|---|---|
| Date(s) of Visit(s): | 01 May 2020 |
| Date of Previous Visit: | N/A |
| Date of Next Scheduled Visit: | 01 August 2020 |
| P. O. Status: | ☒ Complete ☐ Incomplete |
| Project Name: | **OD Equipment Inspection A** |
| Materials/Items Inspected: | Rossi Gearbox (Drawing J1589-01-00) |
| Pre-Inspection Meeting Summary Attached: | ☐ Yes ☒ No |
| Summary Report Attached: | ☐ Yes ☒ No |

**INSPECTION DISPOSITION:** ☐ Accept ☒ Nonconformance(s) Identified ☐ Placed on Hold ☐ Other (Explain)

## INSPECTION SUMMARY AND CONCLUSION:

*Inspection summary:*

The Inspector has carried out inspection on 01 May 2020 according to 4508631918 as below:

Visual inspection to ensure not has damage on painted surface and base material.

- Check color of surface coating in accordance with RAL specified by OEM.
- Check integrity of bare metal surfaces
- Check integrity of machined metal surfaces
- Check data reflected on ID Plates
- Completed Mag particle NDT on structural welds on transport frames

**For more details please refer to Item 6 – Inspection detail.**

*Conclusion:*

Correction actions will be loaded to PDT for BHP's urgent attention.

**RECOMMENDED ACTION:**

- Advise vendors to re-machine critical metal surfaces on relevant equipment flagged in PDT.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **INSPECTION TIME :** | ☒ **DAYS** ☐ **HOURS** | 01 | **TRAVEL HOURS :** | 08 | **DISTANCE:** ☐ **MI** ☒ **KM** | 460 | |
| Technical Specialist: | Dean Terry | Date: | 05 May, 2020 | Project Coordinator : | Martin Smith | | |


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## 1.0 ATTENDEES

| NAME | COMPANY REPRESENTED | TITLE |
|---|---|---|
| Cornelius Castle | BHP | |
| Martin Smith | Omni-tuff | Inspection Coordinator |
| Ross Boyle | Omni-tuff | Preservation Specialist<br>NACE Coating Inspector Level 3 |
| Steve Sillitoe | Omni-tuff | Mechanical Inspector |
| Dean Terry | Omni-tuff | Technical Specialist<br>AS2214 WTIA 17655,<br>AU/IWS/00398 |

## 2.0 MATERIALS

### 2.1 GENERIC MATERIALS

| TAG / EQPT NO. | DESCRIPTION |
|---|---|
| J1589-01-00 | Rossi RC21 630 U01L sin / R57.2 / B6 MOUNT / ∅325x∅355 HOLLOW OUTPUT SHAFT SHRINK DISC, LABYRINTH SEALS, AIR SENTRY BREATHER, BMP, NAMEPLATE, PIPEWORK, MAG. SUMP PLUG, PT 100 TEMP PROBES, LOCATING SPIGOT, FAN COOLING |
| | |

### 2.2 MATERIALS INSPECTED

| PO ITEM NO. | TAG / SERIAL NO. | PRODUCT / MATERIAL / ITEM NAME | ORDERED QUANTITY | PRESENTED THIS VISIT | ACCEPTED THIS VISIT | QUANTITY ACCEPTED TO DATE |
|---|---|---|---|---|---|---|
| 4508631918 | J1589-01-00 | Rossi Gearbox | 2 | 2 | 0 | 0 |

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## 3.0 DOCUMENTS USED

| DOCUMENT NO. | REVISION | TITLE | APPROVAL STATUS |
|---|---|---|---|
| **MECOE.BLD.0012** | | **BHP Preservation and Packaging for Repairable Equipment** | Pending |
| **MECOE.BLD.0018** | | **BHP Preparing Repairable Equipment for Transport** | Pending |
| J1589-01-00 | A | Gearbox Drawing Config A | Approved |
| J1589-01-01 | B | Gearbox Drawing Config B | Approved |
| 19001805 OA | 01 | OEM Purchase Order and Conditioning Records | Approved |
| 201911 | 01 | Installation Guide | Approved |

## 4.0 SCOPE OF INSPECTION

| ITP LINE NO. | ITP ACTIVITY DESCRIPTION | ITEMS | RESULTS | CLAUSE |
|---|---|---|---|---|
| 01 | Dimension & ID Plate check | Rossi Gearbox | Accepted | 6.0 |
| 02 | Open and check condition of bare metal | Rossi Gearbox | Pending | 6.0 |
| 03 | Open and check Nm of M56 bolts | Rossi Gearbox | Accepted | 6.0 |
| 04 | Open and check Nm of M20 bolts | Rossi Gearbox | Accepted | 6.0 |
| 05 | Visual inspection | Rossi Gearbox | Accepted | 6.0 |
| 06 | Document review | Rossi Gearbox | Accepted | 6.0 |
| 07 | Re-apply Omni-tuff Preservation | Rossi Gearbox | Accepted | 6.0 |

## 5.0 EQUIPMENT AND INSTRUMENTATION USED

| EQUIPMENT / INSTRUMENT DESCRIPTION | SERIAL NO | CALIBRATION CERT. NO. | EXPIRY DATE |
|---|---|---|---|
| Misalignment Gauge | MC-XTB-63-2130 | CERT-SECEC-0012 | 31/12/2020 |
| Caliper | TBĐ-TCCK-01 | CERT-SECEC-0034 | 31/12/2020 |
| Magnetic Particle NDT Assembly | TBĐ-TCCK-04 | CERT-SECEC-0035 | 31/12/2020 |
| Measuring Tape | TBĐ-TCCK-02 | CERT-SECEC-0016 | 31/12/2020 |
| Elcometer | TBĐ-TCCK-26 | CERT-SECEC-0018 | 31/12/2020 |

## 6.0 INSPECTION EVIDENCE

## 7.0 NON-CONFORMANCES

| NCR # | DESCRIPTION | DATE RAISED | DATE CLOSED |
|---|---|---|---|
| 01 | Mild corrosion grade 02 present on centre shaft | 01/05/20 | Pending |

| | | | |
|---|---|---|---|
| 02 | Pitting evident on fan | 01/05/20 | Pending |
| 03 | Mild damage to machined flange attachments | 01/05/20 | Pending |
| 04 | M56 loose and matting requiring replacement | 01/05/20 | Pending |

## 8.0 ATTACHMENTS TO THIS REPORT

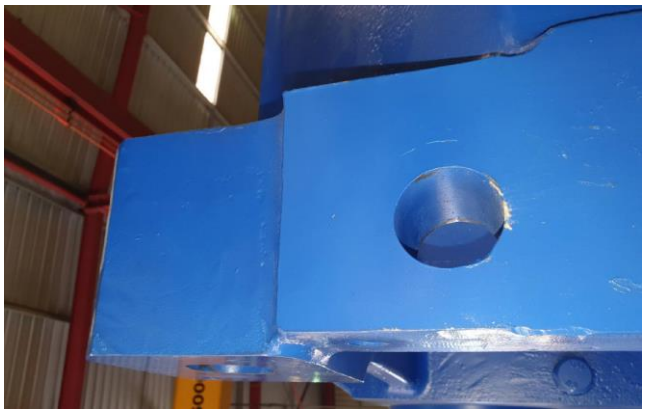
- PO reviewed.
- Dimension reports.
- MT reports.
- NDT Technician Certificate.

## 9.0 PHOTOGRAPHS

Exposed Gearbox once unwrapped

Exposed Flange assembly once unwrapped

Exposed with corrosion protection applied



Gearbox M60 bolt hole once unwrapped

Gearbox while still wrapped

Additional Flanges prior to unwrapping


M56 Bolts in place prior to de-assembly


M60 hole after M56 bolts removal


M56 Bolts during inspection


M20 Bolts during inspection

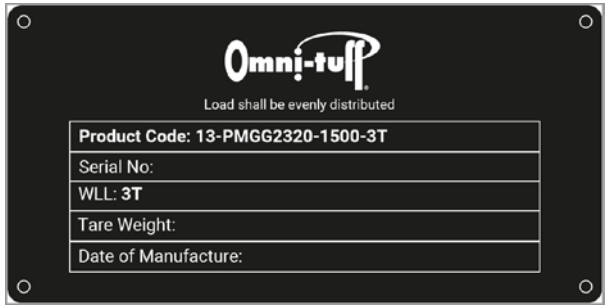
M20 bolt after removal

Pallet after Gearbox removal

END OF THIS REPORT

## **Section A:** Information of the returned steel transport frame

You can take most of the information from the decal on the steel transport frame:




| Information of the steel transport frame returned | |
|---|---|
| **Date of return**: | **Serial number**: |
| **Location that returns good**: | **WLL**: |
| **Product code**: | **Date of manufacture:** |

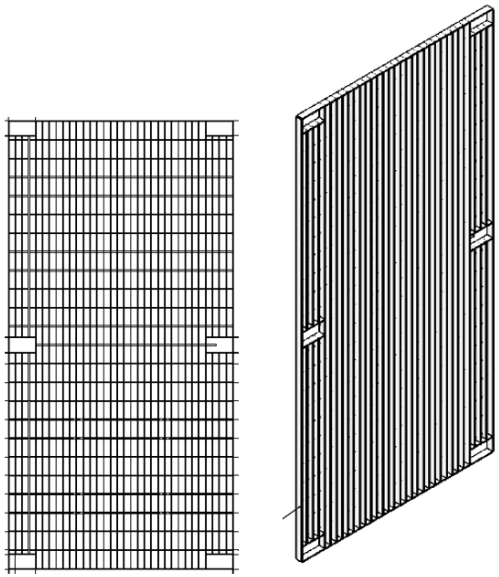
## **Section B:** Check list for goods inwards

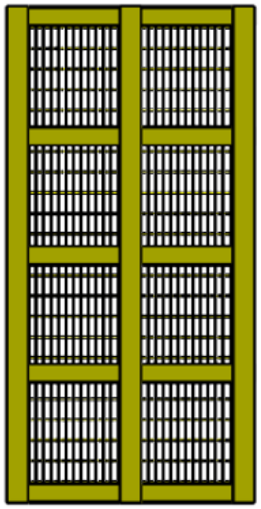
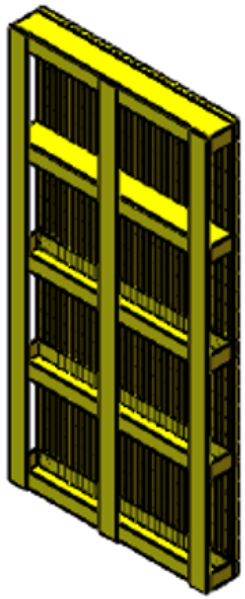
⚠ If any of the following checks fail the steel transport frame need to be discarded for use as it does not comply with the original and rated design of the steel transport frame

| | | | |
|---|---|---|---|
| **Visual inspection** | | • Once the steel transport frame is received a simple visual inspection will be done by the goods inwards personnel to inspect the general appearance of the steel transport frame<br>• At this stage if any of the following check points fail, the pallet needs to be discarded for use as it does not comply with the original and rated design of the steel transport frame | |
| **B1** | **Is there any visual damage to the mesh of the steel transport frame?** |  ✓<br>**No visual difference when comparing the mesh of the returned steel transport frame with original approved drawing** |  ✗<br>**The mesh of the returned steel frame presents missing parts or cuts** |
| **B2** | **Is there any visual damage to the base of the steel transport frame?** |  ✓<br>**No visual difference when comparing the base of the returned steel transport frame with original certified drawing** |  ✗<br>**The base of the returned steel frame presents some visual damage such as cuts or missing parts** |
| **B3** | **Is there any visible modification / addition to the original design of the steel transport frame?** |  ✓<br>**The returned steel frame presents clear modifications/ adittions that where not included in the original certified drawing** |  ✗<br>**The returned steel frame presents clear modifications/ additions such as cuts, extra steel.** |

## **Section C:** Check list for Workshop

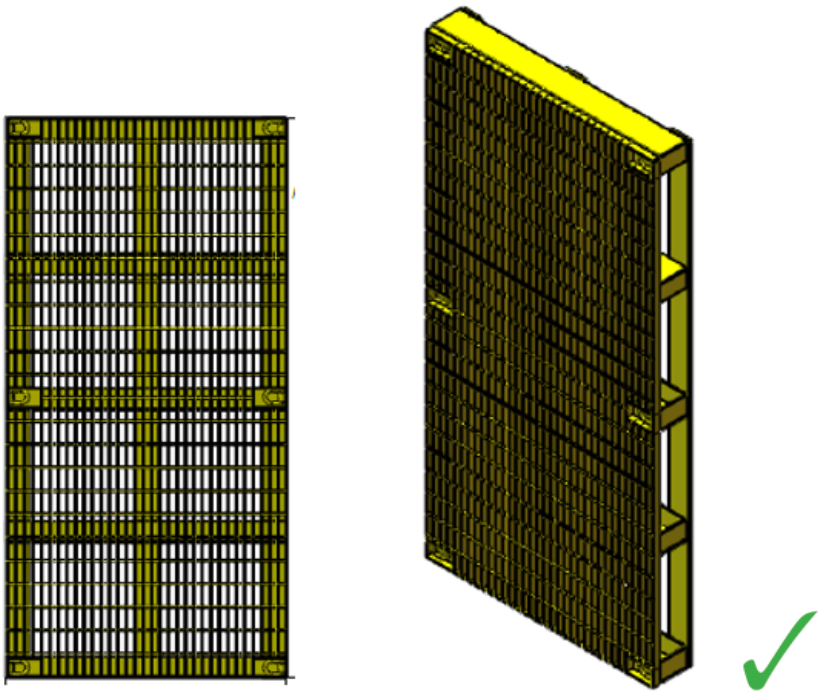
⚠ If any of the following checks fail and is not just a protective coating issue the pallet needs to be discarded for use as it does not comply with the original and rated design of the pallet

| | | | |
|---|---|---|---|
| **A more detailed inspection is performed at this stage** | | • Once the steel pallet is received from Goods inwards, a more detailed inspection of welds and structural members by a qualified person will be followed.<br>• At this stage if any of the following check points fail and is not just a protective coating issue, the pallet needs to be discarded for use as it does not comply with the original and rated design of the pallet | |
| **Checking the mesh** | | | |
| **C1** | **Is there any visible mechanical discrepancy against the drawing of the mesh of the steel transport frame?** |  ✓<br>**The original certified mesh of the steel frame has complete welds between flat bars and twisted wire, outside mesh is not damaged or pushed on an angle, coating is covering the whole mesh area and mesh does not present cut outs** |  ✗<br>**The mesh of the returned steel frame presents missing parts or cuts** |
| **C2** | **Is the mesh bent or smashed?** | |  ✗<br>**The mesh of the returned steel frame presents some visual damage such as mesh bent or smashed** |
| **C3** | **Is there paint or protective coating missing?** | |  ✗  ✗<br>**The mesh of the returned steel frame presents areas with missing coating or some areas presenting rust** |

| Checking the Base | | | |
|---|---|---|---|
| C4 | It there any visible mechanical discrepancy against the drawing of the Base of the steel transport frame? Does the pallet lie flat on the ground? |   ✓ The original certified base of the steel frame has complete welds between the C-channels, also there are not gaps between the C-channel and the top frame, there are no weld gaps between the C-channel and the base plate, no weld gap between the mesh and C-Channel. The base sits flat on the floor and it presents squareness. |  ✗ The base of the returned steel frame lies flat on the ground |
| C5 | Is the base bent or smashed? | |  ✗ The base of the returned steel frame is bent or smashed |
| C6 | Is the paint or protective coating missing? | |  ✗ The base of the returned steel frame presents areas with missing coating or some areas presenting rust |

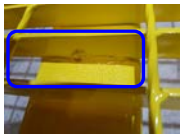
## Checking any other visible welding issue or any other defect

| | |
|---|---|
| C7 | Are there any visible sharp edges? |
| C8 | Are there any visible gaps in the weld |
| C9 | Is there any visible gap in the weld |
| C10 | Are there any visible cuts in the mesh |
| C11 | Are there any weld undercuts or MiG wire remnants |
| C12 | Is there extensive corrosion that may compromise the structural integrity? |



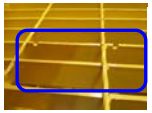
The original certified steel frame has complete welds, presents squareness, it is levelled, it has not sharp edges, it does not present cuts not weld undercuts or MiG wire remmants and it has a coating protection all over the steel frame

The returned steel frame presents visible sharp edges



The returned steel frame presents visible gaps in the weld

The returned steel fram presents visible gaps in the weld



The returned steel frame presents cuts in the mesh

The returned steel frame presents well undercuts of MiG remmants

The returned steel fram presents visible corrosion

**Comments:**

⚠ Please be mindful that if at this stage of the check points we are facing only a protective coating issue and not a mechanical or structural issue we can put the pallet back on inventory and keep using it after solving the issue found