Quality Assurance Management and Quality Control

Quality Plans and Certification

Ruma Products BV. Hoogeveen Holland.
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# QUALITY PLAN
FOR
APPLICATION and INSPECTION
Packers

<table>
<thead>
<tr>
<th>PLAN NUMBER</th>
<th>Packers B.01</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORIGINAL ISSUE</td>
<td>01 September 2012</td>
</tr>
<tr>
<td>CURRENT ISSUE</td>
<td>01 January 2014</td>
</tr>
<tr>
<td>CUSTOMER</td>
<td></td>
</tr>
<tr>
<td>CUSTOMER’S REF.</td>
<td>See Works Order</td>
</tr>
<tr>
<td>SALES REF.</td>
<td>See Works Order</td>
</tr>
<tr>
<td>WORKS ORDER No.</td>
<td>See Works Order</td>
</tr>
</tbody>
</table>

AUTHORISED COPY NUMBER:

CUSTOMER’S APPROVAL SHOWN ON FOLLOWING PAGE
CUSTOMER’S APPROVAL

CUSTOMER:

Original issue of plans and copies subsequently re-issued are subject to strict document control procedures implemented by the Quality Assurance department. This ensures that only current document copies are available to Works and customer’s personnel.

The approval stamp / signature below gives the customer’s approval to all pages of the plan with a date of issue up to and including the approval date shown below.

APPROVED BY : (SIGN)……………………………………
(Print)…………………………………………

POSITION :………………………………………………

DATE :………………………………………………

QUALITY PLAN SCOPE

This Quality Plan covers the receipt of tubular goods, the preparation and installation of SEALS, Vulcanisation and transport to the user. The plan details the contract review, process routes, manufacturing, inspection and testing operations listing the associated control documents and records raised. The control documents listed may be specifications, procedures or work instructions, and provide more explicit details of each operation, or the acceptance criteria applicable.

This plan is to be used in conjunction with the Works Order and the weekly Producing planning, all of which provide job specific details of the customer’s order requirements.
CUSTOMER INSPECTION MARK UP’S
When customers require extra inspection requirement, these will be performed by Ruma at the appropriate point within Ruma production process.

INSTRUCTION CODES
WI = Work Instruction
WO = Work Order

INFORMATION CODES
R # = SIGNIFIES LATEST REVISION TO TEXT
7. Production
Pipe arrives at Ruma/Olique:
Check: pipenumbers
Certificate of conformity
Transport damages;
Sign off freightpapers
- Check thread and seal surfaces
- Covering of calandered material
  (drawing)
7a. Covering department
- Monitor thickness and length of
  band according to drawing
- Wrap
- Pipe identification ac. traceability
8. Vulcanisation department
- Vulcanisation per WO
  Cooling down/remove wrapping
  Visual inspection
  Verify vulcanisation time and temp.
  Verify bonding
  Batch registration ac.traceability
  Sign off monitoring diagram by QC
9. Covering department
Visual control
10. Covering department
- Dress seals
- Visual control
11. Covering department
- Verify of thickness, length of rubber
  covering and initial bonding.
  Wrapping in paper/foil
  Sign off by QC
  Sign off control documents by QA
12. Covering department
- Packaging in wooden crate
- Marking wooden crate as per
  requirements
- Checking packaging
  Sign off QC
13. Ruma exp / transporter
  Roadfreight to harbour
  Sea freight to user
  Sign off freight papers
<table>
<thead>
<tr>
<th>No.</th>
<th>Description of activity</th>
<th>Responsible Department</th>
<th>Ref. Procedure specification</th>
<th>Acceptance criteria</th>
<th>Inspection</th>
<th>Records</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sending Order en correspond all the information Oblique needs</td>
<td>Customer</td>
<td>Contract</td>
<td>P. Order customer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Control review (logistical and product requirements) Ordemaking for Oblique Boxing incl. pipenumber</td>
<td>Production director/ Logistics</td>
<td>B1/B2 Contract</td>
<td>B1/B2</td>
<td>Verify</td>
<td>P. Order customer/ WO Boxing with ref.requirements</td>
</tr>
<tr>
<td></td>
<td>(raw material/elastomer)</td>
<td>Laboratory</td>
<td>E 100</td>
<td>Specification elastomer WO requirements</td>
<td>Measure</td>
<td>WO/Rec. system on lab</td>
</tr>
<tr>
<td>5</td>
<td>Degrease core, shot blasting and control of threads</td>
<td>Blasting dep.</td>
<td>WO</td>
<td>WO</td>
<td>Visual</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Applying bonding wrapping in foil, sign off and transport to Oblique with shipping documents</td>
<td>Production</td>
<td>WO/E100</td>
<td>WO</td>
<td>Visual, measuring layer/ Verify papers</td>
<td>WO</td>
</tr>
<tr>
<td>7</td>
<td>Receiving pipes, sign off freight/papers and certificates</td>
<td>Receiving department</td>
<td>WO</td>
<td>WO</td>
<td>Visual and Verify papers/pipe numbers</td>
<td>WO</td>
</tr>
<tr>
<td>7a</td>
<td>Covering Pipe number identification (if required), thread inspection</td>
<td>Production/ Covering-department</td>
<td>WO/E 100</td>
<td>WO/Pur.Order customer Aut.design</td>
<td>Visual/ Measure</td>
<td>WO</td>
</tr>
<tr>
<td>8</td>
<td>Vulcanisation, Batch registration, Visual insp., sign off monitoring diagram</td>
<td>Vulcan. department</td>
<td>WO/E100</td>
<td>WO</td>
<td>Visual/ Measure</td>
<td>WO/Diagram of vulcanisation</td>
</tr>
<tr>
<td>11</td>
<td>Measurement length/thick. number registration Bonding Ins, sign off certificate sign off inspection papers wrapping in paper foil</td>
<td>Covering Department QCQA Covering dep.</td>
<td>Inspection paperwork WO</td>
<td>WO/Pur.Order customer Aut.design</td>
<td>Measurement</td>
<td>Check formular/ Certificate of compliance Acc.to WO</td>
</tr>
<tr>
<td>12/13</td>
<td>Packaging, marking wooden crate, inspection papers in crate</td>
<td>Production</td>
<td>WO</td>
<td>WO</td>
<td>Visual</td>
<td>WO/6 years</td>
</tr>
<tr>
<td></td>
<td>Sending Sign off freight papers</td>
<td>Expedition/ Oblique transporter</td>
<td>WO/B4/E100</td>
<td>WO</td>
<td>Visual Inspection of crate</td>
<td>WO/Glovia Achieve documents &gt;5 years</td>
</tr>
</tbody>
</table>
# Quality plan Sleeves B.02

**QUALITY PLAN**

**FOR**

**APPLICATION and INSPECTION**

**Sleeves**

<table>
<thead>
<tr>
<th>PLAN NUMBER</th>
<th>Sleeves B.02</th>
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<tr>
<td>ORIGINAL ISSUE</td>
<td>01 September 2012</td>
</tr>
<tr>
<td>CURRENT ISSUE</td>
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<tr>
<td>SALES REF.</td>
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(Print)………………………………………………

POSITION: .............................................................

DATE: ...............................................................
CUSTOMER INSPECTION MARK UP’S
When customers require extra inspection requirement, these will be performed by Ruma at the appropriate point within Ruma Products production process.

INSTRUCTION CODES
WI = Work Instruction
WO = Work Order

INFORMATION CODES
R # = SIGNIFIES LATEST REVISION TO TEXT
7. Production
Pipe arrives at Ruma:
- Check deliverynotes
- Certificate of conformity
- Transport damages
- Sign off freightpapers
  - Check thread and seal surfaces
  - Covering of calandered material (drawing)

7a. Covering department
- Monitor thickness and length of band according to drawing E/C
- Wrap
- Pipe identification ac. traceability

8. Vulcanisation department
- Vulcanisation per WO
- Cooling down/remove wrapping
- Visual inspection
- Verify vulcanisation time and temp.
- Verify bonding
- Batch registration ac.traceability
- Sign off monitoring diagram by QC

9. Covering department
Visual control

10. Covering department
- Dress seals
- Visual control

11. Covering department
- Verify of thickness, length of rubber covering and initial bonding
- Wrapping in paperfoil
- Sign off by QC
- Sign off control documents by QA

12. Covering department
- Packaging in wooden crate
- Marking wooden crate as per requirements
- Checking packaging
- Sign off QC

13. Ruma exp / transporter
Roadfreight to harbour
Seafreight to user
Sign off freight papers
<table>
<thead>
<tr>
<th>No.</th>
<th>Description of activity</th>
<th>Responsible Department</th>
<th>Ref. Procedure specification</th>
<th>Acceptance criteria</th>
<th>Inspection</th>
<th>Records</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sending Order en correspond all the Information Oblique needs</td>
<td>Customer/Contract</td>
<td></td>
<td></td>
<td>P. Order customer</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Control review (logistical and product requirements)</td>
<td>Production director/Logistics</td>
<td>B1/B2 Contract</td>
<td>B1/B2</td>
<td>Verify</td>
<td>P. Order customer/WO Orders for boxing with ref.requirements</td>
</tr>
<tr>
<td></td>
<td>(raw material/elsaotmer)</td>
<td>Laboratory</td>
<td>E100</td>
<td>Specification elsaotmer WO requirements</td>
<td>Measure</td>
<td>WO/Rec.system on lab</td>
</tr>
<tr>
<td>5</td>
<td>Degrease core, shot blasting and control of threads</td>
<td>Blasting dep. or Vetco</td>
<td>WO/</td>
<td>WO</td>
<td>Visual</td>
<td>WO</td>
</tr>
<tr>
<td>6</td>
<td>Applying bonding wrapping in foil, sign off and transport to Ruma with shipping documents</td>
<td>Production</td>
<td>WO/E100</td>
<td>WO</td>
<td>Visual, measuring layer, Verify papers</td>
<td>WO</td>
</tr>
<tr>
<td>7</td>
<td>Receiving sleeves</td>
<td>Receiving department In coop. with QA/QC</td>
<td>WO/</td>
<td>WO</td>
<td>Visual and Verify papers/pipe numbers</td>
<td>WO</td>
</tr>
<tr>
<td>7a</td>
<td>Covering</td>
<td>Production/Covering-department</td>
<td>WO/E100</td>
<td>WO/Pur.Order customer</td>
<td>Visual/Measure</td>
<td>WO</td>
</tr>
<tr>
<td>11</td>
<td>Measurement length/thick. number registration Bonding Insx. sign off certificate sig off inspection papers wrapping in paper foil</td>
<td>Covering Department QC QA Coveringdep.</td>
<td>Inspection paperwork WO</td>
<td>Aut.design WO requirements</td>
<td>Measurem.</td>
<td>Check formal/ Certificate of compliance Acc.to WO</td>
</tr>
<tr>
<td>12/13</td>
<td>Packaging, marking wooden crate, inspection papers in crate Sending Sign off freight papers</td>
<td>Production Expedition/Ruma transporter</td>
<td>WO/</td>
<td>WO</td>
<td>Visual Inspection of crate WO/</td>
<td></td>
</tr>
</tbody>
</table>
CERTIFICATE OF APPROVAL

This is to certify that the Quality Management System of:

Ruma Products B.V.
Zeppelinstraat 5
7903 BR Hoogeveen
The Netherlands

has been approved by Lloyd's Register Quality Assurance
to the following Quality Management System Standard:

ISO 9001 : 2008

The Quality Management System is applicable to:

According to specifications the design and development, engineering, testing, manufacturing and delivery of swelling sealing products.

Approval Certificate No: RQA666229

Original Approval : 3 December 2012
Current Certificate : 3 December 2012
Certificate Expiry : 2 December 2015

Issued by: Lloyd's Register Nederland B.V.

This document is subject to the provision on the reverse.
K.P. van der Mandeleea 41a, 3027 MB Rotterdam, The Netherlands - KvK nr. 24247948
This approval is carried out in accordance with the audit, assessment and certification procedures and monitored by LRQA.
CERTIFICATE OF APPROVAL

This is to certify that the Environmental Management System of:

Ruma Products B.V.
Zeppelinstraat 5
7903 BR Hoogeveen
The Netherlands

has been approved by Lloyd’s Register Quality Assurance to the following Environmental Management System Standard:

ISO 14001 : 2004

The Environmental Management System is applicable to:

According to specifications the design and development, engineering, testing, manufacturing and delivery of swelling sealing products.

Approval Certificate No: RQA667117
Original Approval : 31 January 2014
Current Certificate : 31 January 2014
Certificate Expiry : 30 January 2017

Issued by: Lloyd’s Register Nederland B.V.
Manufacture Contact Information.

Ruma Products B.V.
Zeppelinstraat 5
7903 BR Hoogeveen
The Netherlands

Tel.  +31 (0) 528 260 160
E-mail: sales@oblique.eu

Manufacture Stamp and Signature

[Stamp and Signature Image]

RUMA PRODUCTS
Zeppelinstraat 5
7903 BR Hoogeveen