



AUROS CASE STUDY

KOHLER CO., Showering and Bathing –
Manufacturing Engineering

Jim Jaeckels – Mgr. Manufacturing Engineering, Plastics Bathing

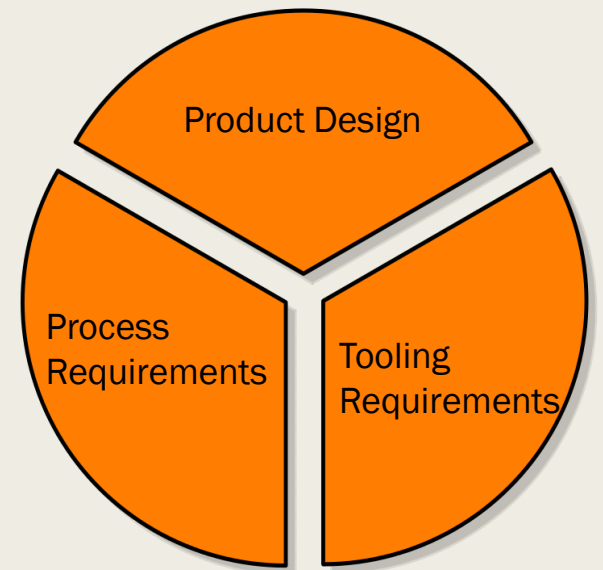
■ KOHLER Co.

- *NA Fixtures*
 - Showering and Bathing Business
 - *Manufacturing Engineering, Plastics Bathing*

■ M.E. Department Responsibilities

- *Project Management: Major Capital Projects*
- *Project Management: Cost-out Projects*
- *New Product Development/Integration*
 - Plastics Mold Shop

Manufacturing Engineering

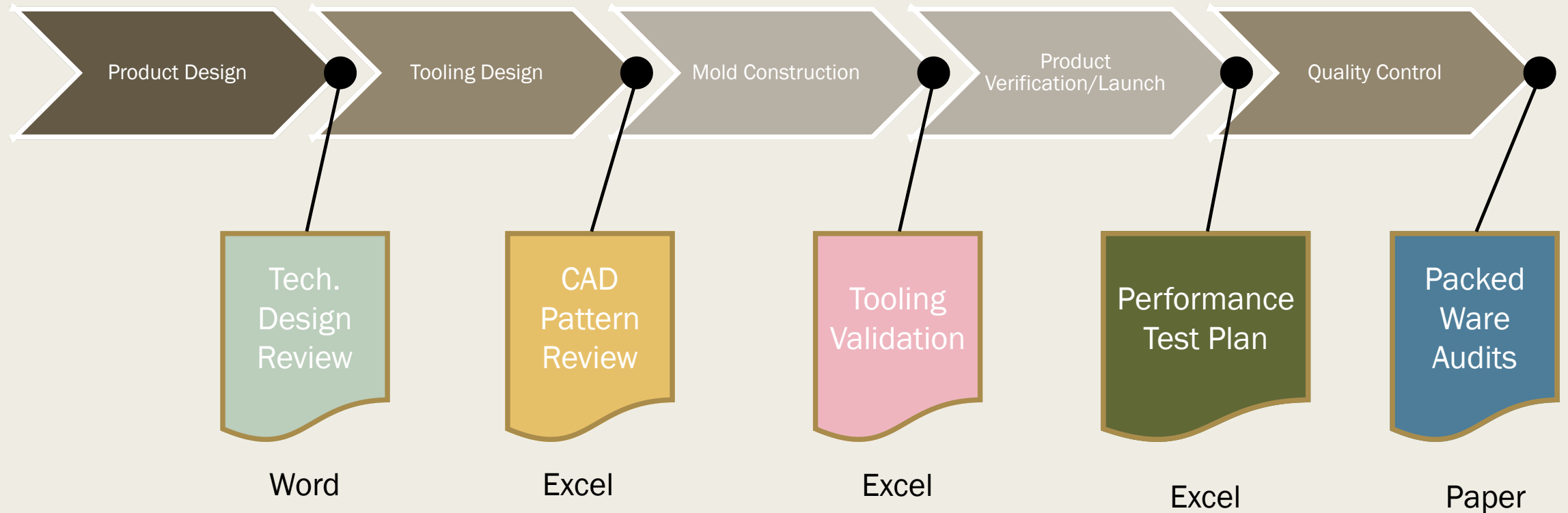


Primary Material: Thermoformed Acrylic Fiberglass Reinforced Plastic

BATHING PRODUCTS



NEW PRODUCT DEVELOPMENT PROCESS



THE PROBLEM

- **Product Engineering** – High Turnover with frequently new engineers with little plastics experience.
- **Manufacturing Engineering** – High seniority Engineers and Technicians.
 - *Mold Shop: 5 Associates, ~91 years of experience.*
 - *Mfg. Eng.: 4 Engineers, ~52 years of experience.*

HOW DO WE BETTER COMMUNICATE REQUIERMENTS TO NEW ASSOCIATES?

HOW DO WE CAPTURE THE TECHNICAL KNOWLEDGE OF Mfg. Eng. ASSOCIATES?

HOW CAN WE MAKE OUR DATA MORE AVIALABLE AND USABLE?

CAPTURE THE KNOWLEDGE

Product Engineering KPAC's

SHETHFD-3B

K-PAC Title Bath Drain Clearance Above Subfloor
Description The bottom of the drain opening in a bath needs to be above the subfloor for installation purposes. This dimension is ultimately determined by bath geometry and relative height of the bath support feet.

Additional Information Bath Drain-to-Floor Clearance

| Drain Floor Clearance | Output Score | Comment |
|-----------------------|--------------|---|
| < .25 | Red | Value is below the acceptable range |
| [.25 - .35] | Yellow | Value is acceptable, preferred range is within .35 - 1.15 |
| [.35 - 1.15] | Green | Value is within preferred range |
| [1.15 - 1.25] | Yellow | Value is acceptable, preferred range is within .35 - 1.15 |
| > 1.25 | Red | Value is above the acceptable range |

Other Info

| | | | |
|------------------------|-------------|----------------------------|----------------------|
| Justification | Guideline | Author | Frage, Scott(ko4002) |
| K-PAC Type | Guideline | Contact | Frage, Scott(ko4002) |
| K-PAC Status | Active | K-PAC Core Template | Basic |
| Current Version | 05-Apr-2017 | | |

Support Document

Attributes

| | |
|--------------------------------------|---|
| Pushed To(CoP) | |
| Pulled By(CoP) | |
| D Phase | D3, D3, D4 |
| Geometry | |
| Installation Type | Alcove, Alcove with Apron, Drop-In, Freestanding |
| Material | |
| PPMA Type | |
| Product | Bath, Hydrotherapy - BubbleMassage, Hydrotherapy - Effervesence, Hydrotherapy - Whirlpool |
| Specification and Test Method | |
| Test Plan Item | |
| Test Stage | |

Tooling KPAC's

SHETHMG-10

K-PAC Title Hold Pattern Flange
Description The cast bottom mold PATTERN should be a minimum of 3" wide, have a 1/2" radius from the sidewall to the flange, and have a sharp edge on the end of the flange. The flange should be 2" thick.

Additional Information Enter Image Text Here

Enter Image Text Here

Enter Image Text Here

| Flange Width | Radius to Sidewall | Is Edge Sharp? | Flange Thickness |
|--------------|--------------------|----------------|------------------|
| 3 | 5 | YES | 2 |
| in | in | in | in |
| Minimum | Minimum | Yes/No | Minimum |
| Flange Width | Radius To Sidewall | Edge Sharp % | Flange Thickness |

Other Info

| | | | |
|----------------------|-----|----------------------------|-----------------------|
| Justification | | Author | Jaekels, Jim(ko48013) |
| K-PAC Type | WIP | Contact | Jaekels, Jim(ko48013) |
| K-PAC Status | WIP | K-PAC Core Template | Basic |

Support Document

Attributes

| | |
|--------------------------|---|
| Pushed To(CoP) | |
| Pulled By(CoP) | |
| D Phase | |
| Installation Type | Alcove, Alcove with Apron, Drop-In, Freestanding |
| Material | |
| Product | Bath, Hydrotherapy - BubbleMassage, Hydrotherapy - Effervesence, Hydrotherapy - Whirlpool |
| Tool Type | Cast Bottom |

Process KPAC's

SHETHMG-63

K-PAC Title Oval Bath Robot Locating Targets
Description This K-PAC is written to define the size and locations for the robot locating targets on oval bath thermoforming tools

Additional Information Block dimensions are 3.5" x 5.0" x 1.5"

BATH TOOL Enter Image Text Here

Enter Image Text Here

| | | | |
|----------------------|---------------|----------------------------|---------------------------|
| Justification | Best Practice | Author | Rauwerdink, Glen(ko07323) |
| K-PAC Type | Best Practice | Contact | Jaekels, Jim(ko48013) |
| K-PAC Status | Proposed | K-PAC Core Template | Basic |

Support Document

Attributes

| | |
|--------------------------|---|
| Pushed To(CoP) | |
| Pulled By(CoP) | |
| D Phase | D3 |
| Installation Type | Drop-In |
| Material | Acrylic/FRP, EcoCrylic |
| Product | Bath, Hydrotherapy - BubbleMassage, Hydrotherapy - Effervesence, Hydrotherapy - Whirlpool |
| Tool Type | |

Teams

CAPTURE THE KNOWLEDGE

■ KPAC Attributes:

– *Material*

- Acrylic FRP
- ExoCrylic

– *Installation*

- Alcove
- Drop-in
- Freestanding

– *Product Type*

- Bath
- Hydrotherapy
- Shower Receptor

– *Process Step*

- Technical Design Review
- CAD Pattern Check
- Mold Construction
- Product Verification
- Packed Ware Audits

APPLY THE KNOWLEDGE

Project Name or Number : K5-Cast Bottom Mold Replacement
Tree Path: K5-Cast Bottom Mold Replacement.A0 > 35

Assessment Control Assessment(Grid) View

Status : Assessment

Manage Filter Combine Filter Views Advanced View Options Issues Reports AC Approvals Multi Sort Set Defaults

Description: K-1122/23 Cast Bottom Molder Hold - re-est.

| Conformance State | K-FAC ID | Status Icon | K-FAC Title | Description | Additional Information | Value Table | Discussion | Attachments | Timeline Multimedia |
|-------------------------------|------------|-------------|-------------------------------|---|---|---|---|-------------|---------------------|
| NE: Red Yellow Green NA | SHBTHPG-13 | VI | Mold Rib Break Location | Rib breaks must be a minimum of 4" center to center from adjacent breaks. | This prevents the rib breaks to line up across ribs, which can act like a hinge and result in poor bottom deflection and floor cracking. | Value: 4 Reported: 32.9 Minimum: 4 Maximum: 32.9 | | | |
| NE: Red Yellow Green NA | SHBTHPG-12 | VI | Mold Rib Length | Maximum rib length must not exceed 18". Insert runner breaks as needed to meet this requirement. The fan for the extruder is considered a runner break. | Significantly exceeding this requirement risks local shrinkage of the resin ribs causing bottom floor warpage, water drainage issues and/or floor cracking. | Value: 18 Reported: 22.15 Minimum: 18 Maximum: 22.15 | | | |
| NE: Red Yellow Green NA | SHBTHPG-11 | VI | Mold Rib Spacing | The maximum spacing between bottom ribs must not exceed 5.5" | Significantly exceeding this risks falling bottom deflection in the unsupported area. | Value: 5.5 Reported: 6.1 Minimum: 5.5 Maximum: 6.1 | <p>0 Owen, Adam@MHI161, 20-Aug-2017 - Rib spacing updated to 6.10. Image of overlay with existing 1122 mold scan attached.</p> <p>0 Jackson, Josh@MHI123, 01-Aug-2017 - This dimension needs to match the existing 1122 CBH scan.</p> <p>0 Jones, 01-Aug-2017 - On Yellow select - Owen, Adam@MHI161: This distance ensures approx board fit.</p> | | |
| NE: Red Yellow Green NA | SHBTHPG-8 | VI | Mold Height | The minimum cast bottom mold height must be 4" above the bubble/tearage top row of holes. | This prevents resin overflowing the mold in manufacturing. | Value: 4 Reported: 4 Minimum: 4 Maximum: 4 | | | |
| NE: Red Yellow Green NA | SHBTHPG-47 | VI | Size/Shape Verification Check | Check for proper shape and size by overlaying the cast bottom mold CAD model with digital scans of existing cast bottom molds or formed shells. | These CAD models cannot be relied upon to match up with actual parts due to shell shrink after thermofforming. Scans of existing cast bottom inside or the backside scans of actual shells should be used to confirm proper sizing prior to starting tooling. | Value: .020 Reported: .020 Reference: Yab/No K5_Shape_47 | <p>0 Jones, 01-Aug-2017 - On Yellow select - Owen, Adam@MHI161: This was updated per the incorrect first cut. Marking this yellow to show this.</p> | | |

- An Assessment control is a collection of requirements (KPAC's)
- Based on Attributes selected.
- Collects actual measurement data.
- Determines pass/fail.
- Documents issues and discussions.

APPLY THE KNOWLEDGE

| Assesment Controls | Product Engineering | | | Process KPAC's |
|---------------------------|----------------------------|-----------------------|---|-----------------------|
| | KPAC's | Tooling KPAC's | | |
| Technical Design Review | X | | | |
| CAD Pattern Review | X | X | X | |
| Tooling Validation | | X | X | |
| Performance Test Plan | X | | | |
| Packed Ware Audits | X | | | |

PERFORMANCE VISIBILITY – BACK END

Progression Report - Google Chrome
 D:\10.20.124.203:8080/auros/jsp/CLProgressiveReport.jsp

Progression Report

Print Export Filter Clear Sorting Views Save Share Group By No Sub Category Report By PROJECT NAME

| K-PAC | K-PAC Title | Description | OK_15123 | OK_15143 | OK_15144 | OK_15163 | OK_15183 | OK_15203 | OK_15204 | OK_15223 | OK_15243 | OK_15263 | OK_15283 | OK_15303 | OK_15323 | OK_15343 | OK_15363 | OK_15364 | OK_15365 | OK_15383 | OK_15384 | OK_15403 | OK_15423 | OK_15424 | OK_15463 | OK_15483 | OK_15503 | OK_15523 | OK_15524 |
|-------------|--------------------------------------|---|----------|--------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--------------|--------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| PWA-1 (#1) | Packed Ware Audit in Total Pass/Fail | Any Potentially Significant Findings must be reviewed by Production Supervisor AND Quality Supervisor for proper disposition as to significance to NTL category and level of corrective action necessary. | Conform | Not Evaluate | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Not Evaluate | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform |
| PWA-8 (#1) | Apron Gap to Floor | Negative measurement = apron too long. Allowable -1/16 to 5/16". | Conform | Not Evaluate | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Not Evaluate | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform |
| PWA-12 (#1) | Switch Gap | Max allowed 1/16". Record Pass/Fail. | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform |
| PWA-13 (#1) | Zip Ties | Confirm zip ties are installed to hold up pipes at H-dip locations. | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform |
| PWA-16 (#1) | Installation Manual & Template | Installation Manual & Template in box | Conform | Not Evaluate | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Not Evaluate | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform |
| PWA-17 (#1) | Sonic Welds Secure | Check for any broken sonic welds on apron supports or sidewall braces | Conform | Not Evaluate | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Not Evaluate | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform |
| PWA-18 (#1) | Drop-in Rim Height | Height of rim 1.5" +/- 3/16". Check all 4 sides. Record Pass/Fail. | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform |
| SHBTHPD-46 | Apron Warpage check | To determine the procedure and acceptable criteria for warpage and apron height on bath and whirlpool. | Conform | Not Evaluate | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Not Evaluate | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform |
| SHBTHPD-55 | Marking & Labeling | All product labeled per print/specification. | Conform | Not Evaluate | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Not Evaluate | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform |
| SHBTHPD-72 | Whirlpool System Function | Pump primes in < 2 seconds at initial fill; all jets rotate and aspirate. | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform |
| SHBTHPD-10 | Length of Bath/Shower | Record the measurement difference from nominal. Example: 59.90" would be recorded as -0.10" | Conform | Not Evaluate | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Not Evaluate | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform |
| SHBTHPD-11 | Nail-in Flange Trim Width | Measure and record nailing flange width. | Conform | Not Evaluate | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Not Evaluate | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform |
| SHBTHPD-13 | Rim Draft for Flange Products | At no time shall the rim be drafted to promote water drainage onto the floor. | Conform | Not Evaluate | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Not Evaluate | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform |
| SHBTHPD-14 | Kohler Logo Placement | Confirm the KOHLER logo is positioned correctly according to the print. Visual inspection of centerness and straightness. | Conform | Not Evaluate | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Not Evaluate | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform |
| SHBTHPD-15 | Drop-in Rim Warpage check. | Internal requirement: 3/16" max. variation | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform |
| SHBTHPD-16 | Color Spots | An area on or within the surface of the material with a color variance to the surrounding area, surface smoothness is not impacted. | Conform | Not Evaluate | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Not Evaluate | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform |
| SHBTHPD-17 | Bumps/Blisters/Burr etc. | An area on or within the surface of the material that impacts the surface smoothness, color is not impacted. | Conform | Not Evaluate | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Not Evaluate | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform |
| SHBTHPD-18 | Cracks | A visible fracture in the surface material and impacts surface smoothness. | Conform | Not Evaluate | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Not Evaluate | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform |
| SHBTHPD-19 | Chill Lines/Print Through | Deformation in the surface material appears as line or thin area in the acrylic. | Conform | Not Evaluate | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Not Evaluate | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform |
| SHBTHPD-19 | Color Uniformity | Defect due to thin/incorrect surface material or dark backside reinforcement showing through. Color matched or resin repair material | Conform | Not Evaluate | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Not Evaluate | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform | Conform |

- Packed Ware Audit Results
- Visually see Frequencies and Patterns of non-conformities

PERFORMANCE VISIBILITY – FRONT END

Assessment Occurrences :1971 View most recent 500 Assessment Occurrences View

Export to Excel Filter Column Chooser

| Assessment ID | K-PAC Version | SKU | Conformance Sta | Last Modified On | K-PAC Title | Value Table | Discussion | | | | | | | | | |
|--|---------------|----------|-----------------------|----------------------|-----------------------|---|------------|-----|-----|----------|--------|--------|--|--------|--------|--|
| SPRTNBG-CK27503 (#1-0) | Latest | 1123-LA- | Conformance | 06-Sep-2018 06:48:21 | Kohler Logo Placement | <table border="1"> <tr><td>Reported</td><td>YES</td><td>YES</td></tr> <tr><td></td><td>Yes/No</td><td>Yes/No</td></tr> </table> | Reported | YES | YES | | Yes/No | Yes/No | | | | |
| Reported | YES | YES | | | | | | | | | | | | | | |
| | Yes/No | Yes/No | | | | | | | | | | | | | | |
| SPRTNBG-CK27483 (#1-0) | V 1 Latest | 1946-LA- | Not Evaluated | 06-Sep-2018 09:11:44 | Kohler Logo Placement | <table border="1"> <tr><td>Value</td><td></td><td></td></tr> <tr><td>Reported</td><td>YES</td><td></td></tr> <tr><td></td><td>Yes/No</td><td>Yes/No</td></tr> </table> | Value | | | Reported | YES | | | Yes/No | Yes/No | |
| Value | | | | | | | | | | | | | | | | |
| Reported | YES | | | | | | | | | | | | | | | |
| | Yes/No | Yes/No | | | | | | | | | | | | | | |
| SPRTNBG-CK27464 (#1-0) | V 1 Latest | 8461- | Confirmed Conformance | 06-Sep-2018 08:27:06 | Kohler Logo Placement | <table border="1"> <tr><td>Value</td><td></td><td></td></tr> <tr><td>Reported</td><td>YES</td><td>YES</td></tr> <tr><td></td><td>Yes/No</td><td>Yes/No</td></tr> </table> | Value | | | Reported | YES | YES | | Yes/No | Yes/No | |
| Value | | | | | | | | | | | | | | | | |
| Reported | YES | YES | | | | | | | | | | | | | | |
| | Yes/No | Yes/No | | | | | | | | | | | | | | |
| SPRTNBG-CK27463 (#1-0) | V 1 Latest | 8461- | Not Evaluated | | Kohler Logo Placement | <table border="1"> <tr><td>Value</td><td></td><td></td></tr> <tr><td>Reported</td><td></td><td></td></tr> <tr><td></td><td>Yes/No</td><td>Yes/No</td></tr> </table> | Value | | | Reported | | | | Yes/No | Yes/No | |
| Value | | | | | | | | | | | | | | | | |
| Reported | | | | | | | | | | | | | | | | |
| | Yes/No | Yes/No | | | | | | | | | | | | | | |
| SPRTNBG-CK27443 (#1-0) | V 1 Latest | 8659- | Non-Conformance | 06-Sep-2018 08:06:06 | Kohler Logo Placement | <table border="1"> <tr><td>Value</td><td></td><td></td></tr> <tr><td>Reported</td><td>NO</td><td>NO</td></tr> <tr><td></td><td>Yes/No</td><td>Yes/No</td></tr> </table> | Value | | | Reported | NO | NO | | Yes/No | Yes/No | Sims, Yolanda(ko11500) , 06-Sep-2018 - The inspector didn't use the logo gage for this unit. The inspector was made aware of this issue and inspector fixed the problem. |
| Value | | | | | | | | | | | | | | | | |
| Reported | NO | NO | | | | | | | | | | | | | | |
| | Yes/No | Yes/No | | | | | | | | | | | | | | |
| SPRTNBG-CK27423 (#1-0) | V 1 Latest | 1123- | Not Evaluated | | Kohler Logo Placement | <table border="1"> <tr><td>Value</td><td></td><td></td></tr> <tr><td>Reported</td><td></td><td></td></tr> <tr><td></td><td>Yes/No</td><td>Yes/No</td></tr> </table> | Value | | | Reported | | | | Yes/No | Yes/No | |
| Value | | | | | | | | | | | | | | | | |
| Reported | | | | | | | | | | | | | | | | |
| | Yes/No | Yes/No | | | | | | | | | | | | | | |
| SPRTNBG-CK27403 (#1-0) | V 1 Latest | 1131- | Confirmed Conformance | 05-Sep-2018 17:10:47 | Kohler Logo Placement | <table border="1"> <tr><td>Value</td><td></td><td></td></tr> <tr><td>Reported</td><td>YES</td><td>YES</td></tr> <tr><td></td><td>Yes/No</td><td>Yes/No</td></tr> </table> | Value | | | Reported | YES | YES | | Yes/No | Yes/No | |
| Value | | | | | | | | | | | | | | | | |
| Reported | YES | YES | | | | | | | | | | | | | | |
| | Yes/No | Yes/No | | | | | | | | | | | | | | |
| SPRTNBG- | V 1 | | | | | <table border="1"> <tr><td>Value</td><td></td><td></td></tr> </table> | Value | | | | | | | | | |
| Value | | | | | | | | | | | | | | | | |

- Look-across for a single requirement.
- Where and when this requirement was used.
- Frequency of conformance at our figure tips.

ISSUES MANAGEMENT

Issue Detail View - Google Chrome
10.20.124.203:8080/auros/jsp/viewissue.jsp?issue_number=65

Issue Id - 65

Work Deliverable Information

| | |
|-------------------|---|
| Project | 3PC |
| Priority | 3-Awareness |
| Issue Description | 6366-0 inward bow |
| Discussion | <p>o Knutson, Ryan(ko78248), 03-May-2018 - Updated tasks, Capability, standard and new shroud tool</p> <p>o Knutson, Ryan(ko78248), 20-Apr-2018 - Added tasks, Anthony & Scott.</p> |
| Comments | This product was launched with an inward bow on the long sidewalls of the shroud. This was a design intent to prevent the sidewall of the shroud from becoming wavy. Our production fixtures intentionally apply a small amount of inward pressure during the glassing process. This was deemed acceptable and preferred. |
| Mitigation Action | Awareness of complaint about design. \\Wovisa03.kohlerco.com\quality\Ross\6366_Shroud_Long_Side_Concave_Warp |

People

Work Deliverable Attachments

Other Elements

| | |
|-----------------------|--|
| D Phase | |
| Notes | |
| Owner | |
| Part Number/Rev Level | |
| Plant | KB |
| Product | Plant affected by this Issue |
| Task List | Share data on current capability of bowing. Update Print and/or Warp standard to address shrouds. |
| Due Date | Task List |

| Task Description | Task Owner | Target Date | Actual Date |
|---|------------------------------|-------------|-------------|
| Share data on current capability of bowing. | Divine, Anthony(ko85209) | 27-Apr-2018 | |
| Update Print and/or Warp standard to address shrouds. | Bhindervala, Husein(ko93054) | 31-May-2018 | |

- Our issues are now tied to requirements.
- Discussions with the right people are documented.
- Resolution documented with the requirement.
- Future users can see past issues.