FleXinspect

Host Communication
- Protocol Specification-

October 31, 2023

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25758A1 – FLEX TCPIP PER BOTTLE DATA SPECIFICATION

Document Revision History

Date	Author	Description of change
18 Mar 2011	P.Spiteri	Preliminary Version
19 Oct 2011	C. Anderson	Updated Flex BC data mapping
25 Apr 2012	C. Anderson	Updated Flex T data mapping with Any Dimensional, Height, Diameter, and Lean defect info.
26 Nov 2012	C. Anderson	Updated Flex BC data mapping with Shoulder defects
27 Feb 2014	C. Anderson	Added port 9200 protocol
15 Apr 2014	J Driscoll	Format to match released part number 25758A1 in Windchill
19 May 2014		Updated Flex T data mapping with Finish info.
9 Sep 2014	J Driscoll	Host communication is now implemented on FlexRadar. It utilizes port 9030 only. Numbering fixed to use styles to update TOC properly
3 Feb 2015	J Driscoll	FlexRadar InspectionResults1 now populated
17 Aug 2016	S Lu	Corrected the BottlePath data size to be 16 bits (instead of 32 bits) for all products. Updated the FlexRadar InspectionResult1 32-bit data to include Stuckware/Downware and WareSpacing information
1 Sep 2016	M Reed	Corrected FlexRadar iInspectionResult data bit mapping. Reverted back to original mapping from (Rev B). Added Stuckware/Downware to Bit 12 and Warespacing to Bit 13.
13 Sep 2016	M Reed	Update FlexRadar INT 16 iBottlePath table Reserve bits for Flex Products and add Bit 4 for manual reject Update FlexT/M INT 16 iBottlePath table Reserve Bit 4 Update FlexBC/C/B INT 16 iBottlePath table Reserve Bit 4 Update FlexRadar INT 32 iInspectionResult table Bit 9 Birdswing (Application Version 2.0 and higher only) Update FlexRadar INT 32 iInspectionResult table Bit 10 Heavy Seam (Application Version 2.0 and higher only) Update FlexRadar INT 32 iInspectionResult table Bit 11 Custom (Application Version 2.0 and higher only)
7 June 2019	P. Eid	FlexT/M 9030 protocol update: Added LVC inspections (4) to replace Check Channels 29-32. Removed OOR2. Added TrampGlass. Added Sidewall Transparent. Added BC WireEdge.
31 Oct 2023	C. Anderson	Added rejector bits to FlexT/M 9030 bottle path.

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1. Introduction

The FleXinspect cold end family of inspection systems from Emhart Glass communicates with a Host over network TCP/IP. This document defines the information exchanged between a FleXinspect and the Host.

2. Per Container- Pass/Fail (Port 9030)

For every container inspected the FleXinspect sends a comma-separated ASCII packet containing pass/fail information. These packets are automatically sent to the Host upon connection to **port 9030**.

Packet Format:

Date, Time, Section, Cavity, reserved, Mold, reserved, BottlePath, InspRes1, InspRes2, InspStatus, EOData

Date	Date stamp the container was inspected
Time	Time stamp the container was inspected
Section	The section number this container originated from 00 if not determined
Cavity	The cavity within the section this container originated 00 if not determined
Mold	The mold number read by the machine (000 if no mold was read)
BottlePath	16 bit hexadecimal indicating the bottle path. See section 4 for bit mapping
InspRes1	32 bit hexadecimal. First part of inspection results. Bits are set when inspection fail. See section 4 for bit mapping
InspRes2	32 bit hexadecimal. Second part of inspection results Bits are set when inspection fail. See section 4 for bit mapping
InspStatus	32 bit hexadecimal. Bits are set for non-inspection related information. See section 4 for bit mapping
EOData	"End of data" marker

Example:

06/11/2004,14:56:41.140,03,02, rsvd, 000, rsvd, 0x0043, 0x90000000, 0x00000000, 0x00000008, EOData

3. Machine Specific Data Mapping (Port 9030)

This section describes the mapping of data for each specific inspection machine

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a. FleXinspect T and FleXinspect M

All unused or undocumented bits are reserved and can be either 0 or 1.

FlexT	INT16 iBottlePath;
Bit 0	Unused
Bit 1	Container Rejected.
Bit 2	Container is Mold Select (request from remote host).
Bit 3	Container is QC Select (request from user interface)
Bit 4	Reserved
Bit 5	Container is Mold Reject.
Bit 6	Unused
Bit 7	Container was run in sample mode (Challenge Sample).
Bit 8	Container rejected at Rejector 1
Bit 9	Container rejected at Rejector 2
Bit 10	Container rejected at Rejector 3
Bit 11	Container rejected at Rejector 4
Bits 12-15	Unused

FlexT	INT32 iInspectionResults1;
Bits 0-25	Bit set when defect detected on corresponding check channels 1 to 26 respectively.
Bit 26	Defect detected on Vision MNR. (only active if inspection performed with Vision MNR station)
Bit 27	Defect detected on Sidewall Lower camera Transparent.
Bit 28	Defect detected on Sidewall Upper camera Transparent.
Bit 29	Defect detected on Vision Ring.
Bit 30	Defect detected on Vision Plug.
Bit 31	Defect detected on Vision Dip.

FlexT	INT32 iInspectionResults2;
Bit 0	Defect detected on any Wall Thickness.
Bit 1	Defect detected on Mechanical Ring.
Bit 2	Defect detected on Mechanical Plug.
Bit 3	Defect detected on Mechanical Dip.
Bit 4	Defect detected on Mechanical Height.
Bit 5	Defect detected on Dimensional.
Bit 6	Defect detected on Tramp Glass.
Bit 7	Defect detected on Wall Thickness 1.
Bit 8	Defect detected on Wall Thickness 2.
Bit 9	Defect detected on Wall Thickness 3.
Bit 10	Defect detected on Wall Thickness 4.
Bit 11	Defect detected on Sidewall Lower camera

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Bit 12	Defect detected on Sidewall Upper camera
Bit 13	Defect detected on Sidewall Lower camera Stress.
Bit 14	Defect detected on Sidewall Upper camera Stress.
Bit 15	Defect detected on Base.
Bit 16	Defect detected on Base stress.
Bit 17	Defect detected on Finish Damage.
Bit 18	Defect detected on Out of Round.
Bit 19	Unused
Bits 20-21	Bit set when defect detected on corresponding check channels 27 and 28 respectively.
Bits 22-25	Bit set when defect detected on corresponding Laser check channels VC Vertical Right, VC Vertical Left, VC Horizontal Left, VC Horizontal Right respectively.
Bit 26	Defect detected on Sealing Surface.
Bit 27	Defect detected on Height tool.
Bit 28	Defect detected on Diameter tool.
Bit 29	Defect detected on Lean tool.
Bit 30	Defect detected on Finish / Line Scan Sealing Surface.
Bit 31	Unused

FlexT	INT32 iInspectionStatus;
Bits 0-2	Unused
Bit 3	Bit set when container is an Infeed Sensor mistrack.
Bit 4	Unused
Bit 5	Bit set when container is an Outfeed Sensor mistrack.
Bit 6	Bit set when container is a misinspect.
Bit 7	Unused
Bit 8	Container was a Mold No Read (machine could not read a mold number)
Bit 9	Bit set when container mold read is determined a valid read (mold number on running list).
Bit 10	Bit set when container mold read is determined to be invalid (read a number but not on running list).
Bits 11-18	Unused
Bit 19	Bit set when defect detected on one or more check channel. Provides simple means to tally all containers that failed for at least one check channel.
Bits 20–30	Unused
Bit 31	Container was a Discard (Rejected because the machine could not guarantee container was fully inspected)

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b. FleXinspect BC, FleXinspect B, and FleXinspect C

All unused or undocumented bits are reserved and can be either 0 or 1.

FlexBC	INT16 iBottlePath;
Bit 0	Unused
Bit 1	Container Rejected.
Bit 2	Container is Mold Select (request from remote host).
Bit 3	Container is QC Select (request from user interface)
Bit 4	Reserved
Bit 5	Container is Mold Reject.
Bit 6	Unused
Bit 7	Container was run in sample mode (Challenge Sample).
Bits 8-15	Unused

FlexBC	INT32 iInspectionResults1;
Bit 0	Defect detected on Sealing Surface
Bit 1	Defect detected on Vision MNR
Bit 2	Defect detected on Base
Bit 3	Defect detected on Base Stress
Bit 4	Defect detected on Vision Plug
Bit 5	Defect detected on Vision Dip
Bit 6	Defect detected on Opaque 1
Bit 7	Defect detected on Opaque 2
Bit 8	Defect detected on Opaque 3
Bit 9	Defect detected on Transparent 1
Bit 10	Defect detected on Transparent 2
Bit 11	Defect detected on Transparent 3
Bit 12	Defect detected on Dimensional 1
Bit 13	Defect detected on Dimensional 2
Bit 14	Defect detected on Dimensional 3
Bit 15	Defect detected on WireEdge
Bit 16-31	Unused

FlexBC	INT32 iInspectionResults2;
Bit 0	Defect detected on any Opaque.
Bit 1	Defect detected on any Transparent.
Bit 2	Defect detected on any Stress.
Bit 3	Defect detected on any Dimensional.
Bit 4	Defect detected on any Shoulder.
Bit 5	Defect detected on any opaque 4-6, transparent 4-6 or stress 4-6
Bit 6	Defect detected on Opaque 4
Bit 7	Defect detected on Opaque 5

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Bit 8	Defect detected on Opaque 6
Bit 9	Defect detected on Transparent 4
Bit 10	Defect detected on Transparent 5
Bit 11	Defect detected on Transparent 6
Bit 12	Defect detected on Dimensional 4
Bit 13	Defect detected on Dimensional 5
Bit 14	Defect detected on Dimensional 6
Bit 15	Defect detected on Height tool.
Bit 16	Defect detected on Diameter tool.
Bit 17	Defect detected on Lean tool.
Bit 18 - 31	Unused.

FlexBC	INT32 iInspectionStatus;
Bit 0	Unused
Bit 1	Unused
Bit 2	Unused
Bit 3	Bit set when container is an Infeed Sensor mistrack.
Bit 4	Unused
Bit 5	Bit set when container is an Outfeed Sensor mistrack.
Bit 6	Bit set when container is a misinspect.
Bit 7	Unused
Bit 8	Container was a Mold No Read (machine could not read a mold number)
Bit 9	Bit set when container mold read is determined a valid read (mold number on running list).
Bit 10	Bit set when container mold read is determined to be invalid (read a number but not on running list).
Bits 11-30	Unused
Bit 31	Container was a Discard (Rejected because the machine could not guarantee container was fully inspected)

c. FlexRadar

All unused or undocumented bits are reserved and can be either 0 or 1

FlexRadar	INT16 iBottlePath;
Bit 0	Unused
Bit 1	Container Rejected.
Bit 2	Reserved
Bit 3	Reserved
Bit 4	Manual Reject
Bit 5	Reserved
Bit 6	Unused

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Bit 7	Reserved
Bits 8-15	Unused

A container of FlexRadar can be rejected for several reasons. Below is a mapping of why a container has been marked for rejection. A single container may have multiple reasons for rejection.

FlexRadar	INT32 iInspectionResults1;
Bit 0	Stone
Bit 1	Blister
Bit 2	Inspection Local Distribution
Bit 3	Other Inspection Failure
Bit 4	Diameter
Bit 5	Lean
Bit 6	Horizontal Glass Distribution
Bit 7	Vertical Glass Distribution
Bit 8	Temperature
Bit 9	Birdswing
Bit 10	Heavy Seam
Bit 11	Custom
Bit 12	Stuckware/Downware
Bit 13	Warespacing
Bit 14-31	Unused

The Following below are not currently in use for the FlexRadar product
iInspectionResults2
iInspectionStatus

4. Per Container – Additional Tool Details (Port 9200)

For every container inspected, the FleXinspect sends an XML-formatted packet containing additional tool details. This packet provides inspection information intended to supplement the container results provided in 9030. These packets are automatically sent to the Host upon connection to **port 9200**. This port is not in use with the FlexRadar.

Packet Format:

All messages are enclosed within a ContainerResult XML tag. A ContainerResult tag includes the elements: "ID", "Reject", "Defect", "Discard", "Misinspect", plus a "ToolResult" element for each inspection tool with details available. Each ToolResult element contains the attributes "name", "defect", plus tool-specific attributes.

ContainerResult Element:

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The ContainerResult element always includes the following elements:

ID	Unique ID for the container.
Mold	The mold number read by the machine. (0 if no mold was read)
Reject	"True" if the container was rejected for any reason, otherwise "False".
Defect	"True" if the container was rejected due to an inspection defect, otherwise "False".
Discard	"True" if the container was rejected due to a misinspect or mistrack.

Not all inspection tools have details currently available in the Port 9200 packet. The number of ToolResult elements included depends on the inspection setup.

General ToolResult Attributes:

ToolResult elements always include the following attributes:

name	Tool name.
defect	"True" if the container had an inspection defect on this tool, otherwise "False".

5. Machine Specific Data Mapping (Port 9200)

This section describes the specific tool results currently available for each inspection machine. New inspection tool elements and attributes may be added to the protocol in the future.

a. FleXinspect T / FleXinspect M

The following tool results are available on the FleXinspect T and FleXinspect M:

Wall Thickness

The "name" attribute will be equal to "WTIS X", where X is the number 1-4. Wall Thickness results include the following attributes in addition to the General ToolResult attributes:

min	Minimum thickness measured.
max	Maximum thickness measured.
average	Average thickness measured.

Example of FleXinspect T container packet with 4 WTIS units enabled:

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```
<ContainerResult>
  <ID>1</ID>
  <Mold>13</Mold>
  <Reject>False</Reject>
  <Defect>False</Defect>
  <Discard>False</Discard>
  <ToolResult name="WTIS 1" defect="False" min="1.67" max="1.67"
average="1.67" />
  <ToolResult name="WTIS 2" defect="False" min="1.67" max="1.67"
average="1.67" />
  <ToolResult name="WTIS 3" defect="False" min="1.67" max="1.67"
average="1.67" />
  <ToolResult name="WTIS 4" defect="False" min="1.67" max="1.67"
average="1.67" />
</ContainerResult>
```

b. FleXinspect BC / FleXinspect C

The following tool results are available on the FleXinspect BC and FleXinspect C:

Height

The "name" attribute will be equal to "Height". Results include the following attributes in addition to the General ToolResult attributes:

average	The average measured height.
high	The highest measured height.
low	The lowest measured height.

Finish Diameter

The "name" attribute will be equal to "Finish Diameter". Results include the following attributes in addition to the General ToolResult attributes:

average	The average measured diameter.
high	The highest measured diameter.
low	The lowest measured diameter.

Filler Lean

The "name" attribute will be equal to "Filler Lean". Results include the following attributes in addition to the General attributes:

overall	The composite filler lean.

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Container Lean

The "name" attribute will be equal to "Container Lean". Results include the following attributes in addition to the General attributes:

overall	The composite container lean.

Caliper

The "name" attribute will be equal to "Caliper X", where X is number of the caliper tool.
Results include the following attributes in addition to the General ToolResult attributes:

average	The average measured diameter.
high	The highest measured diameter.
low	The lowest measured diameter.

Example of container packet with Dimensional Tool and 2 Calipers enabled:

```
<ContainerResult>
  <ID>8</ID>
  <Mold>0</Mold>
  <Reject>True</Reject>
  <Defect>True</Defect>
  <Discard>False</Discard>
  <ToolResult name="Finish Diameter" defect="False"
low="24.1359605000019" high="24.1596213909424"
average="24.1517344272956" />
  <ToolResult name="Caliper 1" defect="False"
low="31.3944333318109" high="32.2196265123328"
average="31.6694977253182" />
  <ToolResult name="Caliper 2" defect="False"
low="60.0480723998321" high="60.9799119754145"
average="60.6692987835537" />
  <ToolResult name="Container Lean" defect="False"
overall="3.38760388252839" />
  <ToolResult name="Filler Lean" defect="False"
overall="0.404497297763208" />
  <ToolResult name="Height" defect="False" low="248.264476651613"
high="252.3884250612972" average="251.49587550967269" />
</ContainerResult>
```

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c. FlexRadar N/A

The FlexRadar does not utilize port 9200 at this time.

6. MNR List Access (Port 9110)

This section defines how to read and modify the Mold Number reader lists.

All commands and responses are formatted using the XML format and are sent via TCP/IP on **port 9110**.

MNR List Access is not available on the FlexRadar product.

a. MNR Lists

The following list are maintained by the FleXinspect

- Running List (**RUNNING**)
- Reject List (**REJECT**)
- QCS Lists (**QCS1, QCS2, QCS3, QCS4**)

Running List

The Running list is a list of all the molds currently running on the manufacturing line. The FleXinspect automatically adds and removes molds from the Running list as it sees them come and go on the manufacturing line.

Reject List

The Reject list is a list of all the molds that should have their container rejected from the line. Each mold also has a reason for rejection associated with it. A particular mold may be on the Reject list more than once, but for different reasons.

If AutoRejectInvalids is YES, then whenever any mold is on the Reject list, mold no-read and invalid molds are also rejected. An invalid mold is one where a mold number was read, but it is not on the Running list.

If AutoRejectNoReads is YES, then molds are rejected if they are not read.

Each entry on the list also contains the "critical" flag. If the Critical flag for any entry is "YES" then the Reject list will automatically reject Invalids. If no entries have the critical flag on, then Invalids will not be rejected. (If AutoRejectInvalids is YES, then the critical flag is irrelevant; Invalids will always be rejected.)

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b. QCS Lists

The machine maintains 4 Quality Control Select lists. The Quality Control Select lists are used to transfer bottles off the main line and onto a sampling line or holding table for off-line inspection.

When a mold is on a QCS list, it also has a quantity associated with it. The quantity determines how many bottles of that mold are to be selected. When the "SelectRound" command is received, each bottle on the Running list will be added to the selected QCS list (i.e. the quantities will be incremented by one).

There are several setup parameters associated with the QCS lists. The "MaxSelectRate" parameter specifies the minimum number of seconds between bottles selected. If "AutoDisable" is NO, then the MaxSelectRate parameter is used; if it is YES, then the list is automatically disabled after a bottle is selected, and it is not re-enabled until a command is received to change the CurrentState. The "OutputPath" parameter specifies which output signal will be activated when bottles are selected from the list. If "SelectBadBottles" is NO, then bottles that have defects detected by the inspection system will not be selected. "CurrentState" indicates if the list is enabled or disabled. The list is disabled while the MaxSelectRate timer is running, or after a bottle is selected if AutoDisable is being used. The "AutoRoundInterval" specifies that the machine will automatically select rounds and how many minutes between each round; if it is set to zero, then rounds will not be automatically selected.

c. MNR Lists Commands

The following types of commands are available:

Read a List

- **ListQuery** – Get a list of the molds currently on a list.

Change a List

- **ListClear** – Clear the specified list.
- **RunListAdd** – Add a mold to the Running list.
- **RunListRemove** – Remove a mold from the Running list.
- **RejectListAdd** – Add a mold to the Reject list.
- **RejectListRemove** – Remove a mold from the Reject list.
- **QCSListAdd** – Add a mold to the QCS lists.
- **QCSListRemove** – Remove a mold from a QCS list.
- **SelectRound** – Select a "round" of bottles.

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List Setup

- **ListSetupQuery** – Read the setup parameters for a list.
- **RunListSetup** – Change the setup parameters of the Running list.
- **RejectListSetup** – Change the setup parameters of the Reject list.
- **QCSListSetup** – Change the setup parameters of a QCS list.

Event Notification

- **StartNotify** – Open a list change notification session.
- **StopNotify** – Close a notification session.

All communication is enclosed within a MoldListMessage tag.

All command messages are enclosed within a MoldListCommand tag. Responses are enclosed within a MoldListCommandResponse tag. The MoldListCommand tag may include an ID attribute. If present the ID attribute is returned in the response. The response indicates whether the command was successfully executed or not; if the command was a request for information, that information is also included.

d. MNR Lists Commands - Examples

The following sections show examples of XML to generate commands and the corresponding responses.

Read a List

To get a list of the molds currently on a list use the ListQuery tag.

```
<!-- Ask for the Reject list -->
    <MoldListMessage>
    <MoldListCommand ID="506">
        <ListQuery>
            <MoldList>REJECT</MoldList>
        </ListQuery>
    </MoldListCommand>
    </MoldListMessage>


<!-- Here is the response. Reject list contains molds 4 and 32. -
->
    <MoldListMessage>
```

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```
<MoldListCommandResponse ID="506">
        <Result>SUCCESS</Result>
        <MoldListData>
                <MoldList>REJECT</MoldList>
                <RejectListEntry>
                        <Mold>4</Mold>
                        <Reason>ThinWall</Reason>
                        <Critical>Yes</Critical>
                </RejectListEntry>
                <RejectListEntry>
                        <Mold>32</Mold>
                        <Reason>Pressure</Reason>
                        <Critical>Yes</Critical>
                </RejectListEntry>
        </MoldListData>
</MoldListCommandResponse>
</MoldListMessage>
```

For a Running list only the mold numbers are returned (no reason or critical flag):

```
<!-- Here is a response to a running list query. -->
<MoldListMessage>
<MoldListCommandResponse ID="506">
        <Result>SUCCESS</Result>
        <MoldListData>
                <MoldList>RUNNING</MoldList>
                <RunningListEntry>
                        <Mold>4</Mold>
                </RunningListEntry>
                <RunningListEntry>
                        <Mold>32</Mold>
                </RunningListEntry>
        </MoldListData>
</MoldListCommandResponse>
</MoldListMessage>
```

For a QCS list, the Quantity is also returned:

```
<!-- Here is a response to the QCS list query. -->
<MoldListMessage>
<MoldListCommandResponse ID="506">
        <Result>SUCCESS</Result>
        <MoldListData>
                <MoldList>QCS1</MoldList>
                <QCSListEntry>
```

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```
            <Mold>4</Mold>
            <Quantity>3</Quantity>
        </QCSListEntry>
        <QCSListEntry>
            <Mold>32</Mold>
            <Quantity>2</Quantity>
        </QCSListEntry>
    </MoldListData>
</MoldListCommandResponse>
</MoldListMessage>
```

Change a List

To change a list, use one of the following commands:

- ListClear
- RunListAdd
- RunListRemove
- RejectListAdd
- RejectListRemove
- QCSListAdd
- QCSListRemove
- SelectRound
-

Clear a List

```
<MoldListMessage>
<MoldListCommand ID="523">
    <ListClear>
        <MoldList>REJECT</MoldList>
    </ListClear>
</MoldListCommand>
</MoldListMessage>
```

Running List

```
<!-- Add molds 12 and 13 to the Running list. -->
<MoldListMessage>
<MoldListCommand ID="505">
    <RunListAdd>
        <Mold>12</Mold>
        <Mold>13</Mold>
    </RunListAdd>
</MoldListCommand>
```

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```
        </MoldListMessage>

        <!-- and here is the response -->
        <MoldListMessage>
        <MoldListCommandResponse ID="505">
            <Result>Success</Result>
        </MoldListCommandResponse>
        </MoldListMessage>
```

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Reject List

```xml
<!-- Add molds 12 and 13 to the Reject list. -->
<MoldListMessage>
<MoldListCommand ID="505">
     <RejectListAdd>
          <RejectListEntry>
               <Mold>12</Mold>
               <Reason>ThinWall</Reason>
               <Critical>YES</Critical>
          </RejectListEntry>
          <RejectListEntry>
               <Mold>13</Mold>
               <Reason>Check</Reason>
               <Critical>YES</Critical>
          </RejectListEntry>
     </RejectListAdd>
</MoldListCommand>
</MoldListMessage>

<!-- and here is the response -->
<MoldListMessage>
<MoldListCommandResponse ID="505">
     <Result>Success</Result>
</MoldListCommandResponse>
</MoldListMessage>
```

QCS Lists

```xml
<!-- Add mold 12 to the QCS list 1 with quantity 4. -->
<MoldListMessage>
<MoldListCommand ID="505">
     <QCSListAdd>
          <MoldList>QCS1</MoldList>
          <Mold>12</Mold>
          <Quantity>4</Quantity>
     </QCSListAdd>
</MoldListCommand>
</MoldListMessage>

<!-- and here is the response -->
<MoldListMessage>
<MoldListCommandResponse ID="505">
     <Result>Success</Result>
```

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```
        </MoldListCommandResponse>
    </MoldListMessage>
```

Select a Round

```
    <MoldListMessage>
    <MoldListCommand ID="524">
            <SelectRound>
                    <MoldList>QCS1</MoldList>
            </SelectRound>
    </MoldListCommand>
    </MoldListMessage>
```

List Setup

Each list has setup parameters that can be read or changed with these commands:

- ListSetupQuery
- RunListSetup
- RejectListSetup
- QCSListSetup

```
<!-- You can get a QCS list setup parameters with this request. -
->
    <MoldListMessage>
    <MoldListCommand ID="507">
            <ListSetupQuery>
                    <MoldList>QCS1</MoldList>
            </ListSetupQuery>
    </MoldListCommand>
    </MoldListMessage>

<!-- Here is the response. This format can also be used (as a
command instead of a response) to change the parameters. -->
    <MoldListMessage>
    <MoldListCommandResponse ID="507">
            <Result>SUCCESS</Result>
            <QCSListSetup>
                    <MoldList>QCS1</MoldList>
                    <MaxSelectRate>25</MaxSelectRate>
                    <AutoDisable>NO</AutoDisable>
                    <SelectBadBottles>YES</SelectBadBottles>
                    <CurrentState>ENABLED</CurrentState>
```

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```
                    <AutoRoundInterval>60</AutoRoundInterval>
            </QCSListSetup>
      </MoldListCommandResponse>
      </MoldListMessage>
```

Here is a command to change the Reject list setup:

```
      <MoldListMessage>
      <MoldListCommand ID="507">
            <RejectListSetup>
                    <AutoRejectInvalids>YES</AutoRejectInvalids>
                    <AutoRejectNoReads>YES</AutoRejectNoReads>
            </RejectListSetup>
      </MoldListCommand>
      </MoldListMessage>
```

Event Notification

```
      <!-- Start a QCS Notify Session: -->
      <MoldListMessage>
      <MoldListCommand ID="242">
            <StartNotify>
                    <EventType>QCSelect</EventType>
            </StartNotify>
      </MoldListCommand>
      </MoldListMessage>

      <!-- and here is the acknowledgement to the command -->
      <MoldListMessage>
      <MoldListCommandResponse ID="242">
            <Result>Success</Result>
            <SessionID>1201</SessionID>
      </MoldListCommandResponse>
      </MoldListMessage>

      <!-- Here is sample data returned for QCS Notify session --
>
      <MoldListMessage>
      <MoldListEvent>
            <SessionID>1201</SessionID>
            <EventType>QCSelect</EventType>
            <MoldList>QCS1</MoldList>
            <Mold>14</Mold>
```

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```
        </MoldListEvent>
    </MoldListMessage>

    <!-- Stop a QCS Notify Session: -->
    <MoldListMessage>
    <MoldListCommand ID="243">
        <StopNotify>
            <SessionID>1201</SessionID>
        </StopNotify>
    </MoldListCommand>
    </MoldListMessage>
```

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