Suspect Indications List

Note: Updated information appears in ***bold and italics.***

Components with the following indications are considered suspect:

I. PIPING AND PIPING COMPONENTS (INCLUDING MECHANICAL AND METAL PRODUCTS)

A. General Indications

- Used component appearance
- Unusual or inadequate packaging
- Foreign newspapers used as packaging
- Scratches on component outer surface
- Evidence of tampering
- Components with no markings
- Pitting or corrosion
- External weld or heat indications
- Questionable or meaningless numbers
- Typed labels
- Evidence of hand-made parts
- Painted stainless steel
- Ferrous metals that are clean and bright
- Excess wire brushing or painting
- Ground-off casting marks with stamped marks in the vicinity
- Ground-off logo mark
- Singes of weld repairs
- Threads showing evidence of wear or dressing
- Inconsistency between labels
- Old or worn nameplates
- Nameplates that look newer than the component
- Missing manufacturers standard markings and logos
- Overlapping stamps
- Different colors of the same part
- Traces of Prussian Blue
- No specification number
- No size designation

- Missing pressure class rating
- Other missing designations per the specification
- Evidence of re-stamping
- Deficient welds on chemical/nuclear shipping casks
- Thinner than expected
- Parts identified as "China" only, **or "*Korea," "Mexico," "Thailand," "India"***
- ***Excess certification logos (i.e., "UL," "FM," "CGA." "AGA" all on one valve body is not normal, usually will have one or two logos plus ANSI or ASME.)***

B. General Valve Indications:

- Wrench marks on valve packing glands, nuts, and bolts
- Nameplates attached with screws rather than rivets
- Poor fit between assembled valve parts
- Dirty internals
- Scratched or marred fasteners or packing glands
- Gate valve: gate off-center when viewed through open end
- Fresh sand-blasted appearance of valve bodies, eye bolts fittings, stems
- Loose or missing fasteners
- Different types of hand wheels on valves of the same manufacturer
- Some parts (e.g., hand wheels) look newer than rest of the valve
- Improper materials (e.g., bronze nut on a stainless stem)
- Post-manufacturing alteration to identification/rating markings
- Indication of Previous Joint Welding
- ***Excessive standards markings (e.g.* UL, FM, CGA, AGA*) (may need to check with manufacturer literature for what standards they use.)***
- ***Valves will not open or close, even when wrench applied.***
- ***Substandard valves mixed in with standard valves (substitution).***

C. Specific Valve Indication: Valves produced by the following manufacturers generally have the following features and are considered suspect if they are missing these features:

Crane Valves:

- Body cast or forged markings
- Crane name
- Pressure rating
- Pattern number
- Nameplate Information:
  - Made from stainless steel (silver color) with black lettering
  - Attached by drive screws OR attached on valve stem underneath handle. Valve size pressure class, operating pressure at temperature
  - Body material
- Seat material on valve body and valve seat
- Stem trim material and heat treat conditions

- Certification data Military specification, if applicable
- Drawing number Shop Order Number (SO#)
- Body cast or forged markings including the name “Crane”
- Valve class
- Valve size
- Grade of steel
- Melt number

Powell Valves (Wm. Powell Co.):

- Body cast or forged markings including the name “Powell”
- Valve class
- Valve size
- Grade of steel
- Melt number
- Nameplate Information:
  - Riveted to valve body OR attached to valve stem underneath handle
  - Attached with single end welded wire (small valves)
  - Serial number
  - Valve size
  - Figure number
  - Body style
  - Valve stem, disc, and seat type
  - Strength at temperature
  - Strength at 100F
  - The WM. Powell Co. Cin., Oh. Made in U. S. A.

Vogt, Henry Machine Co., Inc.:

- Body cast or forged markings:
  - The name “Vogt”
  - Pressure rating
  - Pattern number
  - Size
  - Material specification
  - Two code ID – 3 – letter code and a 4-digit code
- Nameplate Information
  - Made from aluminum with electro-chemical etched lettering
  - Attached on valve stem underneath handle
  - Valve size
  - Pressure class, operating pressure at temperature
  - Body material
  - Internal seat material or internal H.F.
  - Stem trim material
  - Specification number Drawing Number
  - Pressure rating

Walworth Valves:

- Body Cast or forged markings
  - The name "Walworth"
  - Pressure class
  - Size
  - Heat code
  - Serial number (stamped)
- Nameplate information
  - Made from aluminum
  - Attached by drive screws
  - Attached to cover at times
  - Valve size
  - Pressure class and operating pressure at temperature'
  - Body material
  - Internal seat material or H.F.
  - Stem trim material and heat treat conditions
  - Figure number
  - Serial number
  - Location of Manufacture
  - Item code number

Masoneilian—Dresser Valves:

- Masoneilian or Worthington Controls stamped on nameplate
- MD or Masoneilian on valve body

II. ELECTRICAL COMPONENTS

A. General Indications:

- Screwdriver marks on terminals
- Different screw types or materials on terminals
- Handwritten or typed rather than stamped tags
- Missing tags (usually UL approval tag)
- Pitted or worn contacts and lugs
- Not in manufacturer's box or container
- Signs of paint or smoke
- Insufficient nameplate information
- Missing terminals
- Screws used in place of rivets
- Body worn or discolored
- Rough metal edges
- Scratched or marred surfaces
- Metal color inconsistencies
- Modified or re-stamped nameplates

- Improper fastening of nameplates
- Plastic parts of different colors
- Discolored or faded manufacturer's labels
- Past due calibration stickers (internal and external)
- Broken or damaged solder terminations
- Broken or damaged termination lugs
- Contact surfaces that do not mate properly
- Lubrication that appears to be old
- Shipping in plain packaging (no manufacturer bar code)
- ***Used or damaged parts in new packaging***

B. Specific Indications:

Molded Case Circuit Breakers:

- Handle modified to change ampere rating
- Style is no longer manufactured
- Unusual packaging: bulk packaging, generic packages, and cheap appearance
- Refurbisher's name on breaker
- Broken seal between halves
- Contradicting amperage ratings

Fuses:

- Label missing or weathered
- Wear marks on bases

Power (Draw out) Circuit Breakers:

- Different color or shape of over current devices
- Suspicious-looking auxiliary trip devices

Motor Starters:

- Poor fitting or wrong voltage rated operating coil

Motor Control Centers:

- Breakers that are not easily opened or closed with compartment door closed
- Exposed buss work with compartment doors open

Electro-mechanical Relays:

- Poor or loose fitting relays

Potter-Brumfield Relay:

- Sloppy coil lead solder joints
- Painted relay base grommets (normally clean)
- Terminal strips fastened with eyelets
- Painted rivets fastening the terminal strip to the relay housing
- Termination screws in brown paper bags (should be in clear, heat-sealed plastic bags)
- Use of bubble wrap (plastic with Styrofoam should be used)
- Repainted inner bell surface
- Missing or inconsistent date codes, inspection stamp, and test stamp
- Incorrect shaft relay cover clearance, shaft play, and lack of bearing lubricant
- Tops of rotor shafts painted a color other than black
- Non-uniform numbers stamped on the contact decks, indicating decks made up from various relays
- Incorrect coil (i.e., 125 VDC relay with 200 VDC coil)

Capacitors:

- Polished surfaces scratched or dented
- Termination lugs scarred
- Buildup of debris and dirt in termination guards
- Plain packaging (no manufacturer bar codes)

III. FASTENERS

A. General Indications:

- No manufacturer's or grade mark (unless certified to a specification not requiring marking)
- Evidence of machining marks
- Poor thread form, evidence of wear, or dressing
- Head marks shown on the Suspect Fastener Head Mark List
- Foreign manufacturer not meeting Public Law 101-592
- No markings for nuts or washers packaged with labels indicating that they were manufactured to a code or MIL-SPEC which requires marking
- Head markings are marred, missing, or appear to have been altered
- Head markings are inconsistent with a hear/lot
- Double stamping
- Metric and SAE Stamping
- ***Head marks with raised marks and depressed marks on same bolt (not normal manufacturing process)***

IV. DOCUMENTATION AND CERTIFICATION:

A. General Indications:

- Use of correction fluid or correction tape
- Type style or pitch change is evident
- Documentation has missing (or illegible) signature, initial, or data
- Document is excessively faced or unclear
- Inconsistent technical data
- Certification or test results are identical between items when normal variations should be expected
- Document is not traceable to the items procured
- Technical data are inconsistent with code or standard requirements
- Documentation is not delivered as required on the purchase order, or in an unusual format
- Lines on forms are bent, broken, or interrupted indicating that data have been deleted or exchanged by "cut and paste"
- Handwritten entries are on the same document where typed or pre-printed data exist
- Data on a single line are located at different heights
- Product recall
- ***Chemical alloy composition totals 100% (or >99.75%) as shown on Certified Material Test Report (CMTR)***
- ***Heat and lot numbers are same for different materials in same order (i.e. 6010 and 7018 weld wire can not be manufactured from same heat and lot of material.)***

V. STAINLESS STEEL WIRE ROPE:

A. General Indications:

- No or incomplete documentation
- ***Noticeable alteration of documentation***

VI. LIFTING MATERIALS

A. General Indications:

- ***Original markings ground off and re-stamped***
- ***Altered markings on identification tags***
- ***Used appearance of items (i.e., straps appear worn or hooks have indications of previous use)***
- ***Parts identified as "China" only,* or *"Korea," "Mexico," "Thailand," "India" with no manufacturer markings or identifications.***

- ***No or incomplete documentation***
- ***Red hooks not labeled with Crosby Group markings ("Crosby" or "CG") Crosby has "The Crosby Red Carbon Steel Hook U.S.A. Trademark, Registration #2,108,103.***

The following information was reproduced from a Safety Engineering New Bulletin issued by Sandia National Laboratory, Albuquerque, New Mexico. Contact person for this information is Betty Fleming, SNL.

- ***DOE-STD-1099-99, 15.1 Shackles states: Shackles shall meet or exceed the requirements of Federal standard RR-C-271D. Each shackle body shall be permanently and legibly marked in raised or stamped letters on the side of the bow and shall be used to show:***
    - ***Manufacturer's name or trademark***
    - ***Size***
    - ***Safe Working Load (or Working Load Limit)***
- ***ASTM B30.10 Hooks, for importing requires that the manufacturer's identification be forged, cast or die-stamped on a low stress or non-wearing area of the hook***