



**SEAL-LOCK SF
DEFINITION
OF TERMS**

SECTION	II	
Prepared By	GTF	
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Mgr Engr	DR	01/18/01
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REVISION	001	01/11/01

SUBJECT: DEFINITION OF TERMS

BLACK THREAD: A thread on which the original (black) mill surface has not been completely removed from the crest.

BURR: A localized point of roughness, or a thin ridge, or protrusion, produced by mechanical damage or in machining.

CHATTER: A wavy surface caused by vibration during machining.

CLUSTER: Five (5) or more individual imperfection indications in an area 0.250" by 0.250".

CONNECTION: The mated male and female connectors of a particular thread design. *See examples on the reverse side of page.

CONTINUITY OF SEAL SURFACE: The phonograph seal surface is considered continuous if there are no imperfections that are longitudinally longer than 1/8". No more than two (2) imperfections of maximum or near maximum length may be closer than 0.250" circumferentially or be aligned in such a manner that a longitudinal or diagonal leak path may be created.

CRACK: A stress-induced separation of the metal.

CUT: A sharp gouge or distortion in two or more thread crests in a line longitudinal to the pipe axis or at an angle across the threads.

DENT: A depression that is without metal loss and is caused by striking, or being struck by, other objects.

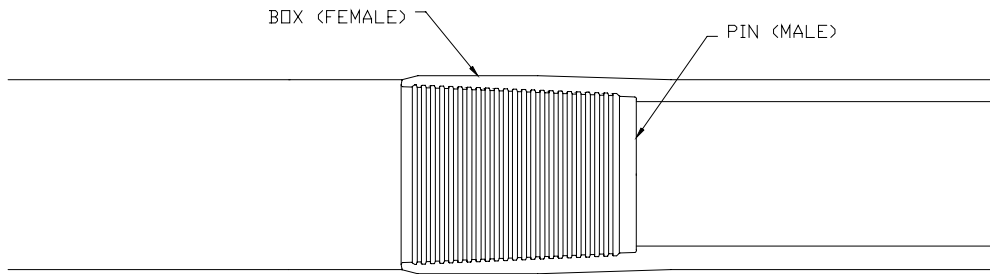
DING: A flattened area or indentation caused by mechanical impact.

ECCENTRICITY: A condition of tubular products in which the O.D. and I.D. axis do not coincide, resulting in wall thickness variations around the circumference at a given section or plane.

FIRST ARTICLE: The first production part that satisfies all specified machining and inspection criteria. FIRST ARTICLE dimensions shall be as close to specified nominal as can be practically obtained from manufacturing equipment without the use of specified tolerances. For all practical purposes, first article dimensions that vary by no more than one-half (1/2) of the specified tolerance shall be considered nominal and further adjustments will not be necessary.

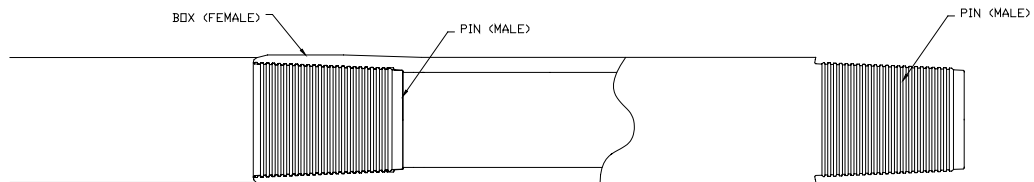
First article inspection shall be performed at the following frequency: 1) at the start of production, 2) following any change to equipment, 3) following any change of machining or inspection personnel, and 4) following a 30 minute or longer delay in production.

SFPB.DWG



EXAMPLE: 1 THREADED BOX & PIN CONNECTION

SFPINBOX.DWG



EXAMPLE: 1 THREADED BOX X PIN CONNECTION AND 1 PIN (MALE) CONNECTOR



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FREQUENCY OF INSPECTION: The interval at which the parts shall be inspected or gaged during the manufacturing process.

- A. **100% Frequency** - All listed elements or items shall be inspected or gaged on each part. Part shall be defined as each pin and/or each coupling with both ends inspected or gaged.
- B. **10% Frequency** - All listed elements or items shall be inspected or gaged on every tenth (10th) part. Part shall be defined as each pin connector and/or each coupling with both ends inspected or gaged.

FULL FORM THREAD: Any portion of a thread where the crest of the load flank is fully formed by the threading insert and the thread height is within 0.001" of nominal.

GALLING: Surface damage caused by localized welding of high spot or foreign material.

GOUGE: Elongated grooves or cavities caused by mechanical removal of metal.

HANDLING DAMAGE: Cuts, gouges, dents, etc., that occurred during handling.

ID: Inside Diameter.

IMPERFECT THREAD: A thread on which the load flank is not fully formed, has insufficient thread height, and may or may not have a black crest.

INCLUSION: Foreign material or non-metallic particles entrapped within the metal during solidification.

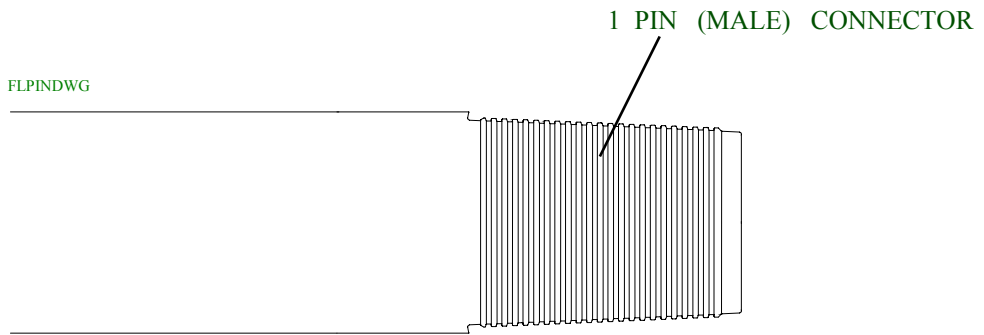
LAP: Fold of metal which has been rolled or otherwise worked against the surface but has not fused into sound metal.

LAMINATION: An internal metal separation creating layers generally parallel to the surface.

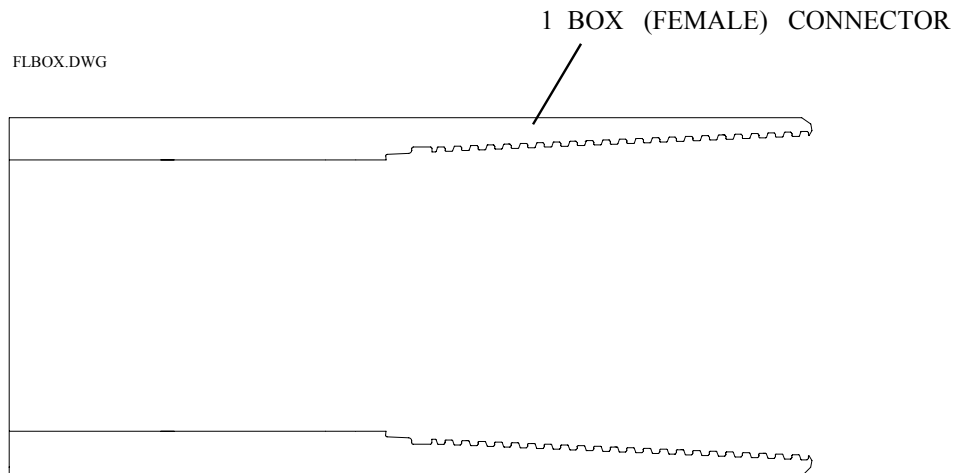
LAST ARTICLE: The last production part on each piece of equipment manufacturing a given product. The Last Article dimensions shall meet all tolerances specified for that product. A last article inspection shall be performed at the following frequency: A) Equipment tool holder change, B) Major equipment adjustment, C) Equipment crash, D) Shutdown, E) At the completion of the manufacturing of a product order.

MINOR PITTING: A) Seal surface minor pitting shall be defined as isolated corrosion pitting that has longitudinal/axial component of 1/4" or less and a depth of 0.003" or less. Isolated pitting may not be aligned longitudinally or diagonally where a potential leak path may be created. B) Thread surface minor pitting in the full form thread length which does not affect the thread height or form per Hunting's definition of a full form thread.

MINOR THREAD DAMAGE: No absolute blanket acceptance/rejection criteria concerning thread damage can be specified due to factors such as actual full form thread length, depth, and location of the damage. Impact type damage that is 0.125" or less in circumferential length and 0.003" or less in depth may be repaired by removing all protrusions on the load flank and thread crests by light filing. All repaired areas shall be covered with an anti-gall and anti-corrosion compound such as Moly-Kote.



EXAMPLE: 1 PIN (MALE) CONNECTOR



EXAMPLE: 1 BOX (FEMALE) CONNECTOR



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NOMINAL: To specified dimensions or theoretical size.

OD: Outside Diameter

PIT: A depression or cavity caused by inclusions or porosity exposed after machining or by corrosive attack during storage.

PLUG SCORES: Longitudinal I.D. grooves occurring in seamless pipe, usually caused by hard pieces of metal adhering to the high-mill plug.

PROPRIETARY: A product that is protected by secrecy, patent, or copyright against free competition.

SEAM: Crevice in rolled metal which has been more or less closed by rolling or other work but has not been fused into sound metal.

SLIVER: An extremely thin elongated piece of metal that has been rolled into the surface of the parent metal to which it is attached usually by only one end.

TORN THREAD: Thread surfaces which have portions that are chipped, rough, or ragged.

TORQUE: A rotational force expressed in foot pounds used to assemble connections.

- A. **Minimum Torque:** The smallest acceptable rotational force required to bring a connection to the specified power tight position.
- B. **Optimum Torque:** The rotational force required to bring a connection to the nominal power-tight position when all elements on each connector are nominal.
- C. **Maximum Torque:** The largest acceptable rotational force required to bring a connection to the specified power-tight position.

VISUAL: As seen with the unaided eye (i.e. without the use of magnification or non-destructive testing methods). Visual inspection incorporates physically feeling for burrs, slivers, feather edges, tears or other surface roughness discontinuities.

