**Krautkramer DMS 2/2E**

This attachment delineates the essential variables for thickness measurements using a Krautkramer DMS 2/2E as required by ASME Sec. V Article 5 Table T-522.

<table>
<thead>
<tr>
<th>Ultrasonic instrument(s)</th>
<th>Krautkramer DMS 2/2E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Search unit type(s), frequency, (ies), and element size(s), shape(s)</td>
<td>Any dual element or single element transducer manufactured for use with the Krautkramer DMS 2/2E.</td>
</tr>
<tr>
<td><strong>Search Unit Type</strong></td>
<td><strong>Frequency</strong></td>
</tr>
<tr>
<td>Dual Element</td>
<td>1-10MHz</td>
</tr>
<tr>
<td>Single Element</td>
<td>1-10MHz</td>
</tr>
</tbody>
</table>

**Material Types and configuration**

This unit can be used to measure thickness on ferrous and non-ferrous plate, sheet, bar, shapes, strip, seamless & welded, forged, or centrifugal cast, pipe & tubing, castings, forgings, E.R.W. tube, wrought fittings

**The surface from which the examination shall be performed**

Examination may take place from any accessible surface,

**Technique(s) (straight beam, angle beam, contact, and/or immersion)**

Technique is straight beam, dual beam, contact method

**Angles and mode(s) of wave propagation**

N/A

**Calibration [calibration block(s) and technique(s)]**

Calibration standards as described in Section 7.0 “Calibration Standard”. The calibration step blocks shall have dimensions certified by NIST or measured with equipment calibrated and certified to NIST.

**Direction and extent of scanning**

Meas. shall be the avg. of three readings within 1” circle

**Scanning (manual vs automatic)**

Manual

**Scan overlap (decrease only)**

Meas. shall be the avg. of three readings within 1” circle

**Method for sizing indications**

N/A

**Computer enhanced data acquisition**

N/A

**Personnel performance requirements**

N/A

**Surface Condition (examination surface, calibration blocks)**

Surface must be free of dirt, grease, oil, loose paint

**Couplant: brand name or type**

Magnaflux Ultragell II

**Post-examination cleaning technique**

Wipe couplant away with clean cloth

**Automatic alarm and/or recording equipment, when applicable**

N/A

**Records, including minimum calibration data to be recorded (e.g., instrument settings)**

Records must include description of the item, a map of locations where thicknesses were taken, and record data items from the procedure (Section 7.4 and Form 1)

Record copy signed by David Harvey, 11/28/18