General

Wall Thickness	The plate, coupon or pipe wall thickness needs to be the same as compared to the inspection object
Wall Thickness Deviation	Deviations of up to 10% wall thickness are permissible
Lift-off Height	The lift-off needs to be representative of the actual inspection scenario

Defect Set

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Sizes of Defects	For regular calibration two diameter sizes of defects are required, typically in the range of 1 and 2 times the sensor diameter
Set Calibration	For each set calibration data should be obtained in far-side and near-side configuration. If the calibration piece is curved, it is required to produce the sets separately internally and externally.
Depth Calibration	From 20% to 80%
Minimal Set Defects	Four. One through-hole defect should be present, preferably of the smaller diameter

Defect Positioning

Defects Separation	150 mm (from edge to edge)
Defects Separation (F15, P19, MPS200)	200 mm (from edge to edge)
Regular Lift-off	<10mm

Machining

It is preferable if the defects are machined with EDM (Electric Discharge Machining)

If mechanical machining is used, it should be ensured, that the metal is sufficiently cooled and the drill bit is sharp, such that no excessive forces are used to cut into the metal

Defects Profile

Deep Defects $\frac{d}{D/2} > 1$ Shallow Defects $\frac{d}{D/2} < 1$

$r = \frac{D}{2}$ $r = \frac{D^2}{8d} + \frac{d}{2}$
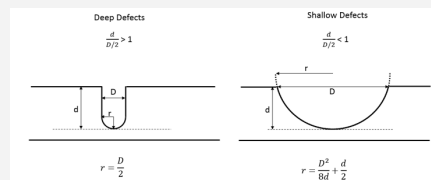
Flat bottom defects can also be used and may in some cases be required by norm.If the radius cannot be machined, because the required tools (bits) are not available, it is more important to keep the defect diameter and use a different depth