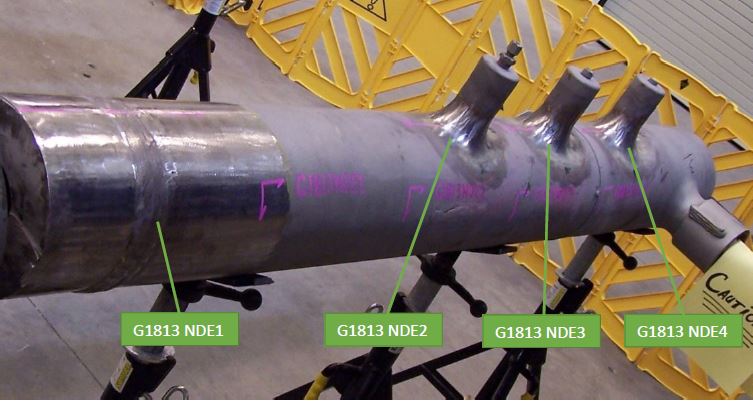
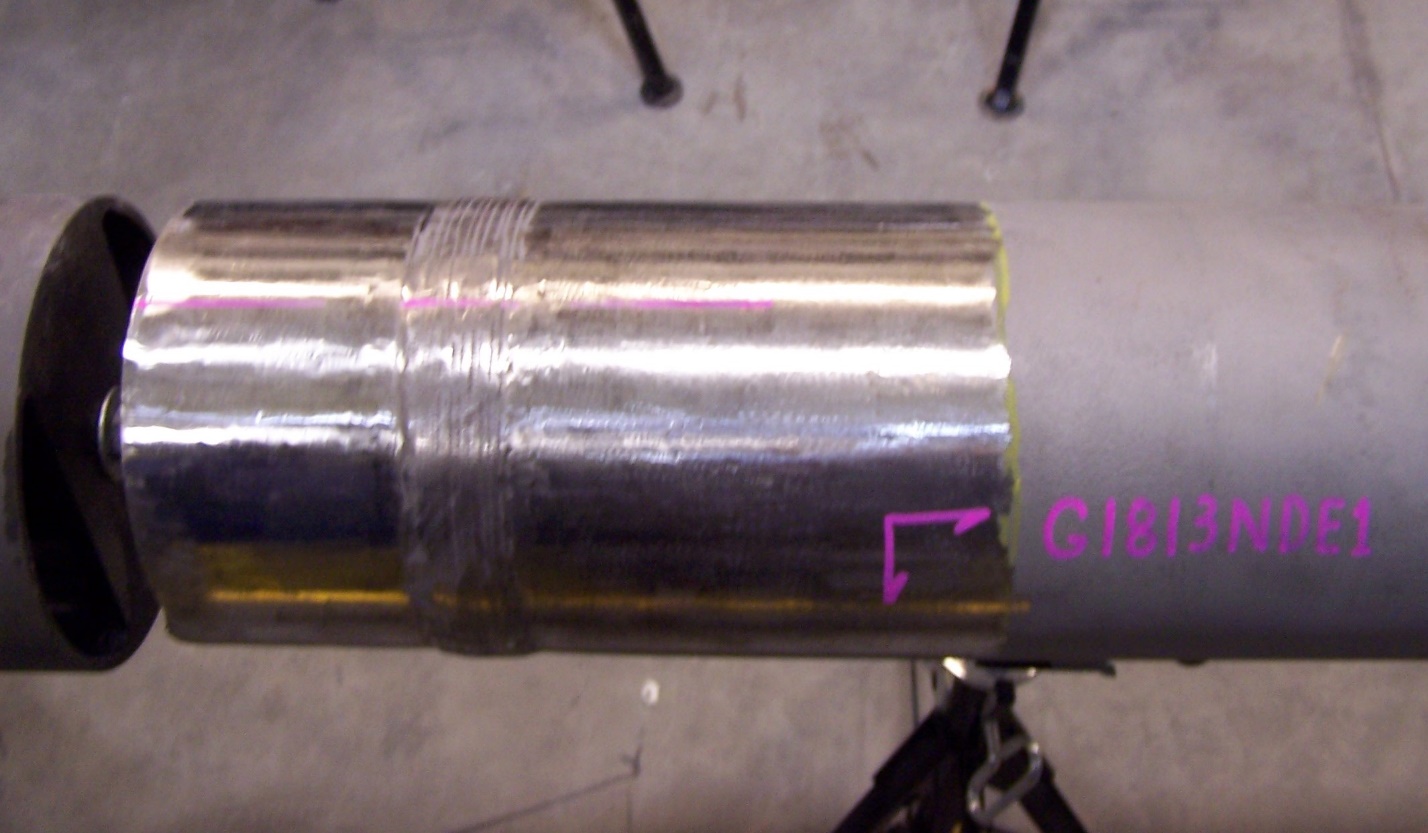
**DOE EEM Eddystone Project**

**G1813-NDE1-4 Inspection Summary**

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**Weld G1813-NDE1**



G1813-NDE1 is a ~2.65” (67 mm) thick weld (SS to SS) of component G1813, at the time of the examination actual weld joint design information was not available.

Color contrast solvent removable dye penetrant surface examinations were performed on the weld and adjacent base material. No relevant indications were observed.

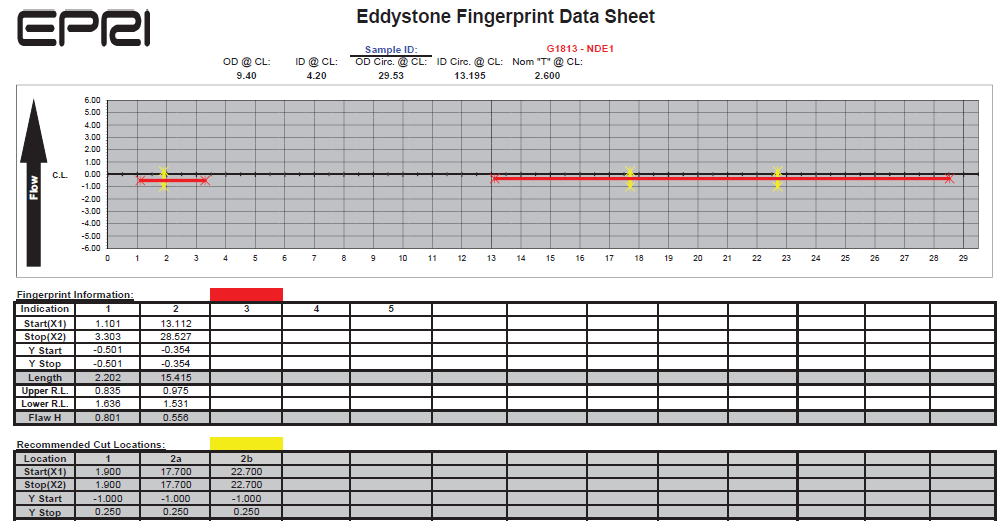
G1813-NDE1 was examined with encoded ultrasonic testing utilizing phased array ultrasonic techniques employing longitudinal wave modes looking for potential service induced discontinuities along with any potential embedded or fabrication related defects that may be identifiable.

Two circumferentially oriented indications were identified in the data from weld G1813-NDE1. Both indications appear to be embedded located in the mid-wall area of the weld material and did not display evidence of inside or outside surface connection (i.e. the indication was embedded in nature).

Specific recommendations for destructive analysis based on the NDE results of the component G1813-NDE1 are as follows:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **G1813-NDE1** | | | | | |
| **Indication #** | **Indication Orientation** | **Cut Location Identifier** | **Cut Direction** | **Cut Positional Information** | |
| **Circumferential** | **Axial** |
| 1 | Circumferential | 1 | Axial cut | 19” (483 mm) | Thru the weld |
| 2 | Circumferential | 2a | Axial cut | 31.3” (795 mm) | Thru the weld |
| 2b | Axial cut | 31.3” (795 mm) | Thru the weld |

**Note:** The areas of interest identified above have also been captured on the applicable data sheet within the fingerprint package. To aid with the destructive testing, indication positions were marked on the outside surface of the component and photographs were taken and included within the fingerprint package. For examples of these items, see images 1, 2, 3 and 4 below.



**Image 1 (G1813-NDE1 Circumferential Indications 1 and 2)**



**Image 2 (G1813-NDE1 Circumferential Indication 1)**

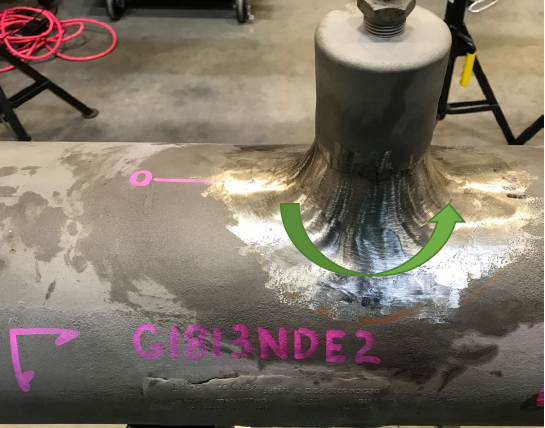


**Image 3 (G1813-NDE1 Circumferential Indication 2 - Cut Location 2a)**



**Image 4 (G1813-NDE1 Circumferential Indication 2 - Cut Location 2b)**

**Welds G1813-NDE2, G1813-NDE3 and G1813-NDE4**







G1813-NDE1, G1813-NDE2 and G1813-NDE3 are set-on branch connection configuration welds of ~0.85” (22 mm) thick branch pipe to ~2.60” (66 mm) thick main run pipe (SS to SS) of component G1813, at the time of the examination actual weld joint design information was not available.

Color contrast solvent removable dye penetrant surface examinations were performed on the welds and adjacent base material. No relevant indications were observed.

G1813-NDE2, G1813-NDE3 and G1813-NDE4 were examined with non-encoded (manual) ultrasonic testing utilizing conventional ultrasonic techniques employing shear (transverse) wave modes looking for potential service induced discontinuities along with any potential embedded or fabrication related defects that may be identifiable.

No responses from service induced or embedded discontinuities were visible in the collected data for these inspection areas.

Specific recommendations for destructive analysis cut locations were not identified in the collected data for G1813-NDE2, G1813-NDE3 or G1813-NDE4.