Appendix 6 to PISC II Report No. 3

Detailed illustration of the defects present in Plate No. 1

Remark
Sizing of defects has to be performed on the radiographic films
Positives are included for illustration purpose only

Programme for the Inspection of Steel Components

PISC
a) ENVELOPE EF THE DEFECT AS INTENDED EXCLUDING SMALL ADJACENT DEFECTS

\[ X_1 = 470 \text{ mm} \quad X_2 = 478 \text{ mm} \quad \Delta X = 8 \text{ mm} \]
\[ Y_1 = 3 \text{ mm} \quad Y_2 = 1000 \text{ mm} \quad \Delta Y = 997 \text{ mm} \]
\[ Z_1 = 117 \text{ mm} \quad Z_2 = 132 \text{ mm} \quad \Delta Z = 15 \text{ mm} \]
Illustration of Defect Nr. 1
Illustration of Defect Nr. 1

Macrograph AT Y = 209

Detail: A

Macrograph AT Y = 459

Detail: A x 12.5
a) ENVELOPE EF THE DEFECT AS INTENDED EXCLUDING SMALL ADJACENT DEFECTS

\[ X_1 = 418 \text{ mm} \]
\[ Y_1 = 86 \text{ mm} \]
\[ Z_1 = 122 \text{ mm} \]
\[ X_2 = 430 \text{ mm} \]
\[ Y_2 = 135 \text{ mm} \]
\[ Z_2 = 132 \text{ mm} \]
\[ \Delta X = 12 \text{ mm} \]
\[ \Delta Y = 49 \text{ mm} \]
\[ \Delta Z = 10 \text{ mm} \]
Illustration of Defect Nr. 2

\[ + \, Z = 125 \, - \]

\[ - \, Y = 150 \, + \]
Illustration of Defect Nr. 2

Macrograph AT Y = 114
a) ENVELOPE EF THE DEFECT AS INTENDED EXCLUDING SMALL ADJACENT DEFECTS

\[ X_1 = 484 \text{ mm} \quad X_2 = 488 \text{ mm} \quad \Delta X = 4 \text{ mm} \]
\[ Y_1 = 70 \text{ mm} \quad Y_2 = 130 \text{ mm} \quad \Delta Y = 60 \text{ mm} \]
\[ Z_1 = 216 \text{ mm} \quad Z_2 = 221 \text{ mm} \quad \Delta Z = 5 \text{ mm} \]
Illustration of Defect Nr. 3
Illustration of Defect Nr. 3

- $x = 450$ +

- $z = 200$

Macrograph AT $Y = 100$
a) ENVELOPE EF THE DEFECT AS INTENDED EXCLUDING SMALL ADJACENT DEFECTS

\[ X_1 = 434 \text{ mm} \quad X_2 = 450 \text{ mm} \quad \Delta X = 16 \text{ mm} \]
\[ Y_1 = 105 \text{ mm} \quad Y_2 = 171 \text{ mm} \quad \Delta Y = 66 \text{ mm} \]
\[ Z_1 = 38 \text{ mm} \quad Z_2 = 47 \text{ mm} \quad \Delta Z = 9 \text{ mm} \]
Illustration of Defect Nr. 4

Macrograph AT Y = 125
a) ENVELOPE EF THE DEFECT AS INTENDED EXCLUDING SMALL ADJACENT DEFECTS

\[ X_1 = 409 \text{ mm} \quad X_2 = 434 \text{ mm} \quad \Delta X = 25 \text{ mm} \]

\[ Y_1 = 235 \text{ mm} \quad Y_2 = 433 \text{ mm} \quad \Delta Y = 198 \text{ mm} \]

\[ Z_1 = 122 \text{ mm} \quad Z_2 = 142 \text{ mm} \quad \Delta Z = 20 \text{ mm} \]
Illustration of Defect Nr. 5
a) ENVELOPE OF THE DEFECT AS INTENDED EXCLUDING SMALL ADJACENT DEFECTS

\[ X_1 = 438 \text{ mm} \quad X_2 = 446 \text{ mm} \quad \Delta X = 8 \text{ mm} \]
\[ Y_1 = 275 \text{ mm} \quad Y_2 = 343 \text{ mm} \quad \Delta Y = 68 \text{ mm} \]
\[ Z_1 = 8 \text{ mm} \quad Z_2 = 16 \text{ mm} \quad \Delta Z = 8 \text{ mm} \]
Illustration of Defect Nr. 6

Macrograph AT \( y = 290 \)
a) ENVELOPE EF THE DEFECT AS INTENDED EXCLUDING SMALL ADJACENT DEFECTS

\[ X_1 = 461 \text{ mm} \quad X_2 = 489 \text{ mm} \quad \Delta X = 28 \text{ mm} \]
\[ Y_1 = 452 \text{ mm} \quad Y_2 = 545 \text{ mm} \quad \Delta Y = 93 \text{ mm} \]
\[ Z_1 = 211 \text{ mm} \quad Z_2 = 225 \text{ mm} \quad \Delta Z = 14 \text{ mm} \]
Illustration of Defect Nr. 7
Illustration of Defect Nr. 7

- y = 500
+ z = 200

25
Illustration of Defect Nr. 7

Macrograph AT Y = 500
a) ENVELOPE EF THE DEFECT AS INTENDED EXCLUDING SMALL ADJACENT DEFECTS

\[ X_1 = 417 \text{ mm} \quad X_2 = 422 \text{ mm} \quad \Delta X = 5 \text{ mm} \]
\[ Y_1 = 469 \text{ mm} \quad Y_2 = 472 \text{ mm} \quad \Delta Y = 3 \text{ mm} \]
\[ Z_1 = 127 \text{ mm} \quad Z_2 = 130 \text{ mm} \quad \Delta Z = 3 \text{ mm} \]
Illustration of Defect Nr. 8

Macrograph AT X = 424
PLATE 1
DEFECT ENVELOPE COORDINATES

DEFECT Nr. 9
DEFECT ENVELOPE DIMENSIONS

a) ENVELOPE EF THE DEFECT AS INTENDED EXCLUDING SMALL ADJACENT DEFECTS

\[ X_1 = 432 \text{ mm} \quad X_2 = 443 \text{ mm} \quad \Delta X = 11 \text{ mm} \]
\[ Y_1 = 486 \text{ mm} \quad Y_2 = 570 \text{ mm} \quad \Delta Y = 84 \text{ mm} \]
\[ Z_1 = 36 \text{ mm} \quad Z_2 = 51 \text{ mm} \quad \Delta Z = 15 \text{ mm} \]
Illustration of Defect Nr. 9

- $y = 550$
- $x = 450$

9.
a) ENVELOPE EF THE DEFECT AS INTENDED EXCLUDING SMALL ADJACENT DEFECTS

\[ X_1 = 418 \text{ mm} \quad X_2 = 442 \text{ mm} \quad \Delta X = 24 \text{ mm} \]
\[ Y_1 = 655 \text{ mm} \quad Y_2 = 763 \text{ mm} \quad \Delta Y = 108 \text{ mm} \]
\[ Z_1 = 121 \text{ mm} \quad Z_2 = 138 \text{ mm} \quad \Delta Z = 17 \text{ mm} \]
Illustration of Defect Nr. 10
Illustration of Defect Nr. 10

Macrograph AT Y = 693
a) ENVELOPE OF THE DEFECT AS INTENDED EXCLUDING SMALL ADJACENT DEFECTS

\[
\begin{align*}
X_1 &= 433 \text{ mm} \\
Y_1 &= 682 \text{ mm} \\
Z_1 &= 37 \text{ mm} \\
X_2 &= 442 \text{ mm} \\
Y_2 &= 778 \text{ mm} \\
Z_2 &= 42 \text{ mm} \\
\Delta X &= 9 \text{ mm} \\
\Delta Y &= 96 \text{ mm} \\
\Delta Z &= 5 \text{ mm}
\end{align*}
\]
Illustration of Defect Nr. 11

Macrograph AT Y = 730
PLATE 1
DEFECT ENVELOPE COORDINATES

DEFECT Nr. 12
DEFECT ENVELOPE DIMENSIONS

a) ENVELOPE OF THE DEFECT AS INTENDED EXCLUDING SMALL ADJACENT DEFECTS

\[
\begin{align*}
X_1 &= 438 \text{ mm} \\
Y_1 &= 682 \text{ mm} \\
Z_1 &= 8 \text{ mm} \\
X_2 &= 448 \text{ mm} \\
Y_2 &= 778 \text{ mm} \\
Z_2 &= 15 \text{ mm} \\
\Delta X &= 10 \text{ mm} \\
\Delta Y &= 96 \text{ mm} \\
\Delta Z &= 7 \text{ mm}
\end{align*}
\]
a) ENVELOPE OF THE DEFECT AS INTENDED EXCLUDING SMALL ADJACENT DEFECTS

\[ X_1 = 452 \text{ mm} \quad X_2 = 455 \text{ mm} \quad \Delta X = 3 \text{ mm} \]
\[ Y_1 = 682 \text{ mm} \quad Y_2 = 790 \text{ mm} \quad \Delta Y = 108 \text{ mm} \]
\[ Z_1 = 1 \text{ mm} \quad Z_2 = 5 \text{ mm} \quad \Delta Z = 4 \text{ mm} \]
Illustration of Defect Nr. 13

Macrograph AT Y = 730
a) ENVELOPE EF THE DEFECT AS INTENDED EXCLUDING SMALL ADJACENT DEFECTS

\[ X_1 = 463 \text{ mm} \quad X_2 = 464 \text{ mm} \quad \Delta X = 1 \text{ mm} \]
\[ Y_1 = 465 \text{ mm} \quad Y_2 = 610 \text{ mm} \quad \Delta Y = 145 \text{ mm} \]
\[ Z_1 = 16 \text{ mm} \quad Z_2 = 18 \text{ mm} \quad \Delta Z = 2 \text{ mm} \]
Illustration of Defect Nr. 14

Macrograph AT $y = 464$
a) ENVELOPE OF THE DEFECT AS INTENDED EXCLUDING SMALL ADJACENT DEFECTS

\[ X_1 = 458 \text{ mm} \quad X_2 = 461 \text{ mm} \quad \Delta X = 3 \text{ mm} \]

\[ Y_1 = 0 \text{ mm} \quad Y_2 = 475 \text{ mm} \quad \Delta Y = 475 \text{ mm} \]

\[ Z_1 = 8 \text{ mm} \quad Z_2 = 11 \text{ mm} \quad \Delta Z = 3 \text{ mm} \]
Illustration of Defect Nr. 15

Macrograph AT Y = 119