|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Test No | Internal pressure [% SMYS] | Flaw length[mm] | Flaw depth[mm] |  |  | CSA predicted strain[%] | CSA predicted strain assuming | PRCI predicted strain[%] |
| 1 | 80 | 50 | 1.7 | 7.25 | 0.25 | 0.94 |  | 0.58 |
| 2 | 30 | 50 | 1.7 | 7.25 | 0.25 | 0.94 |  | 0.5 |
| 3 | 80 | 50 | 3.4 | 7.25 | 0.5 | 0.45 |  | 0.58 |
| 4 | 30 | 50 | 3.4 | 7.25 | 0.5 | 0.45 |  | 0.49 |
| 5 | 80 | 150 | 1.7 | 21.75 | 0.25 | 0.4 | 0.79 | 0.18 |
| 6 | 30 | 150 | 1.7 | 21.75 | 0.25 | 0.4 | 0.79 | 0.16 |
| 7 | 80 | 150 | 3.4 | 21.75 | 0.5 | -0.67 | 0.27 |  |
| 8 | 30 | 150 | 3.4 | 21.75 | 0.5 | -0.67 | 0.27 |  |

It can be observed that for tests 7 and 8 the CSA equation predicts negative tensile strain capacity. This follows from the flaw length being outside the applicability range of the equation (larger than 10 times the wall thickness).

Note that PRCI equations aren’t valid for wall thicknesses outside of the range [12.7 mm, 25.4 mm].