List of Tables

Table 3.1: Chemical composition of materials (in weight %) .................................................................56
Table 3.2: Typical mechanical properties of SA-333 Gr.6 and SS 304LN base and weld material .................................................................................................................................58
Table 3.3: Details of pipe and notch geometries of carbon steel pipe specimens .........................66
Table 3.4: Details of pipe and notch geometries of stainless steel pipe specimens ..................67
Table 3.5: Details of fatigue pre-cracking and final crack sizes of carbon steel pipe specimens .................................................................................................................................68
Table 3.6: Details of fatigue pre-cracking and final crack sizes of stainless steel pipe specimens .................................................................................................................................69
Table 3.7: Results and loading details of the load controlled cyclic tearing tests (all tests at room temperature) .........................................................................................................................78
Table 3.8: Results and loading details of incremental displacement controlled cyclic tearing tests (all tests at Load Ratio, R=-1, at room temperature) ..........................83
Table 3.9: Results and loading details of reversible displacement controlled cyclic tearing tests (all tests at room temperature) .........................................................................................................................88
Table 3.10: Results and loading details of monotonic fracture tests, at room temperature, corresponding to cyclic fracture tests reported in Table 3.7 to Table 3.9 ..........92
Table 4.1: Summary of results obtained from comparison of incremental displacement controlled test with corresponding monotonic fracture test .........................................115
Table 5.1: CSB and CSW Load controlled cyclic tearing tests on identical pipes but with different road ratio .................................................................................................................................151
Table 6.1: Geometry and loading details of monotonic fracture tests, at room temperature, corresponding to cyclic fracture tests reported in Table 6.2 ...............190
Table 6.2: Geometry and loading details of the load controlled cyclic tearing Tests at room temperature .................................................................................................................................190