

LIST OF TABLES

Table No.		Page No.
2.1	Qualitative and Quantitative tools	33
2.2	Equipment types and units	46
2.3	OGP Process vessel failure frequency	47
2.4	OGP Piping failure frequency	47
2.5	OGP Manual valve failure frequency	48
2.6	CCPS Failure frequency type and unit	48
2.7	OREDA Failure data spread sheet for compressor	49
2.8	CPQRA failure frequency types and units	50
2.9	EGIG failure frequency	51
3.1	Guide words	56
3.2	Process parameter	59
3.3	Process parameter and guideword	60
3.4	HAZOP worksheet recommendation	62
3.5	Radiation level criteria	72
3.6	Over pressure level criteria	72
4.1	Operating parameter of LPG storage-case study 1	75
4.2	Scenarios selected for analysis-case study 1	77
4.3	Over pressure over distance-case study 1	80
4.4	Radiation intensity over distance	80
4.5	Operating parameter of H ₂ gaseous storage-case study 2	81
4.6	Vulnerability distance over fire and explosion	83
4.7	Operating parameter of LPG storage case study 3	84

4.8	Operating parameter of Liquid H ₂ storage tank case study 4	90
4.9	Radiation intensity over distance case study 4	94
4.10	Over pressure over distance case study 4	95
4.11	Operating parameter of LPG storage case study 5	98
4.12	Equipment and component of NG storage case study 6	105
4.13	Loss of containment scenarios case study	113
4.14	Leak hole sizes	116
4.15	Equipment list considered for NG	116
5.1	Frequency comparison generic vs. posterior	132
6.1	Accident analysis in Oil and Gas industry	137