

3.6	Reactive Maintenance (RM) .....	24
3.6.1	Reactive Maintenance Philosophy .....	24
3.7	Preventive Maintenance (PM) .....	25
3.7.1	Preventive Maintenance Philosophy .....	25
3.7.2	Preventive Maintenance Tasks .....	26
3.8	Predictive Maintenance (PdM).....	27
3.8.1	Predictive Maintenance Philosophy.....	27
3.8.2	Predictive Testing and Inspection (PT&I) .....	28
3.9	Proactive Maintenance .....	29
3.10	Combining Maintenance Approaches.....	30
3.11	Routine (Scheduled) Maintenance .....	30
3.11.1	Routine (Scheduled) Maintenance Philosophy .....	30
3.11.2	Definition of Scheduled Maintenance .....	31
3.11.3	Classification of Routine Maintenance Tasks.....	31
3.11.4	Maintenance Programs .....	32
3.11.5	Maintenance of Mechanical Equipment .....	32
3.11.6	Organization and Control of Scheduled Maintenance .....	32
3.11.7	Inspection, Quality Control and Follow-Up .....	33
3.11.8	Maintenance and Inspection of Safety/Rescue Equipment.....	34
3.12	Maintenance Tasks Frequency.....	34
3.12.1	Maintenance of Pumps.....	34
3.12.2	Maintenance of Tubewell Pumps .....	34
3.12.3	Maintenance of Motors .....	35
3.13	Operational Maintenance.....	36
3.13.1	M&E (Non-Infrastructure Assets).....	36
3.13.2	Civil (Non-Infrastructure Assets).....	36
3.13.3	ICA .....	37
3.13.4	Infrastructure.....	37
3.13.5	Capital Maintenance .....	37
3.13.6	M&E (Non-Infrastructure Assets).....	37
3.13.7	Civil (Non-Infrastructure Assets).....	37
3.13.8	ICA .....	37
3.14	Maintenance Work Method Statements .....	38
3.14.1	Method Statements on Each Activity and Sub-Activity.....	38
3.15	Maintenance Priority Criteria / Levels .....	39
3.15.1	Targets and Objectives.....	39
3.15.2	Spare Parts Availability.....	39
3.15.3	Storage Facilities .....	40
3.15.4	Inventory Control and Stock Management Procedures.....	40
3.16	Consumables and Spare Parts.....	40
3.16.1	Lubricants and Materials .....	41
3.16.2	Types of Spares.....	41
3.16.3	Procurement of Spare Parts .....	41
3.17	Tools .....	42
3.18	Maintenance Programs and Records .....	43
3.19	Emergency Maintenance .....	43
3.19.1	Work Order and Maintenance .....	44
3.20	Major Repairs and Modification Proposals .....	45
3.21	Updating Maintenance Practices .....	45
3.21.1	Reducing Cost by Changing Work Practices .....	46
3.21.2	Managing Changes in Work Process .....	46
<b>4</b>	<b>TROUBLESHOOTING .....</b>	<b>47</b>
4.1	General .....	47
4.2	Typical Pump Station Problems.....	47
4.3	Troubleshooting in Pumping Facilities .....	48