Contents

Preface	· · · · · · · · · · · · · · · · · · ·
1. General provisions	
1.2. Application and uses	
1.3. Definitions	
1.4. Basic principles	
2. Components of a major haza	rd control system
	fication of major hazard installations.
2.2. Information about the	e installations
2.3. Assessment of major	hazards
2.4. Control of the causes	of major industrial accidents 11
2.5. Safe operation of maj	or hazard installations
2.6. Emergency planning	
2.7. Siting and land-use pl	anning
2.8. Inspection of major h	azard installations
3. General duties	
3.1. Duties of competent a	authorities
3.1.1. General	
3.1.2. Establishment of inf	rastructure for a major hazard control 15
3.1.3. Establishment of an	inventory of major hazard installations 16
3.1.4. Receipt and evaluati	ion of safety reports 16
3.1.5. Emergency planning	and information to the public 17
3.1.6. Siting and land-use	planning 18
3.1.7. Inspection of installa	ations
3.1.8. Reporting of major	accidents
3.1.9. Investigation of mai	or accidents
3.2. Responsibilities of wo	rks management
3.2.1. General	
	13

Prevention of major industrial accidents

	3.2.2. Analysis of hazards and risks 3.2.3. Determination of causes of major industrial accidents 3.2.4. Safe design and operation of major hazard installations 3.2.5. Measures to minimise the consequences of major accidents 3.2.6. Reporting to competent authorities 3.2.7. Information to, and training of, workers 3.3. Duties and rights of workers 3.3.1. Duties of workers	19 20 21 22 22 23 24 24
	3.3.2. Rights of workers	24
	3.4. Duties of the international supplier of technology involving	25
	major hazards	23
	3.5. Use of consultancy services	27
4.	Prerequisites for a major hazard control system	28
	4.1. General	28
	4.2. Manpower requirements	28
	4.2.1. General	28
	4.2.2. Government inspectorate	29
	4.2.3. Group of Experts	29
	4.2.4. Advisory committee	29
	4.3. Equipment	30
	4.4. Sources of information	30
5.	Analysis of hazards and risks	32
	5.1. General	32
	5.2. Preliminary hazard analysis (PHA)	32
	5.3. Hazard and operability study (HAZOP)	33
	5.4. Accident consequence analysis	34
	5.5. Other methods of analysis	34
6.	Control of the causes of major industrial accidents	36
	6.1. General	36
	6.2. Component failure	36
	6.3. Deviations from normal operating conditions	37
	6.4. Human and organisational errors	38
	6.5. Outside accidental interferences	39

Co	ontents
6.6. Natural forces	. 40
6.7. Acts of mischief and sabotage	. 40
7. Safe operation of major hazard installations	. 41
7.1. General	. 41
7.2. Component design	. 41
7.3. Manufacture of components	42
7.4. Assembly of the installation	. 43
7.5. Process control	. 43
7.6. Safety systems	. 45
7.7. Monitoring	17
7.8. Inspection, maintenance and repair	. 47
7.9. Management of change	48
7.10. Training of worker's	. 48
7.11. Supervision	40
7.12. Control of contract work	. 50
8. Emergency planning	
8.1. General	. 51
8.2. Objectives	. 51
8.3. Identification and analysis of hazards	. 52
8.4. On-site emergency planning	. 53
8.4.1 Formulation of the plan	. 53
8.4.2. Alarms and communication	. 54
8.4.3. Appointment of key workers and definition of duties .	. 55
8.4.4. Emergency control centre	. 57
8.4.5. Action on site	. 58
8.4.6. Planning shut-down procedures	. 59
8.4.7. Rehearsing emergency procedures	. 59
8.4.8. Plan appraisal and updating	. 60
8.5. Off-site emergency planning	. 60
8.5.1. General	. 60
8.5.2. Aspects to be included in an off-site emergency plan .	. 61
8.5.3. Role of the emergency co-ordinating officer.	. 62
8.5.4. Role of works managements of major hazard installation	62
8.5.5. Role of the local authorities	. 63
8.5.6. Role of emergency services	. 64

Prevention of major industrial accidents

8.5.7. Role of the government safety authority or inspense. S.5.8. Rehearsals and exercises	ecto	ora	ite 6
9. Information to the public concerning major hazard installation	ns		. 6
9.1. General information			. 6
9.2. Information during an emergency		•	. 69
9.3. Information after a major accident			. 6
10. Siting and land-use planning			. 7
11. Reporting to competent authorities			. 7
11.1. General			
11.2. Objectives of the reporting system		•	. 7
11.3. The notification of major hazard installations		•	74
11.4. The safety report		•	. 74
11.4.1. General			. 74
11.4.2. Description of the installation, processes and haz	aro	doi	18
substances			\sim 76
11.4.3. Description of the hazards and their control			. 77
11.4.4. Description of the organisation			. 78
11.4.5. Description of emergency provisions			. 79
11.4.6. Handling and evaluation of safety reports			. 80
11.5. Updating of safety reports			. 81
11.6. Reporting of accidents			. 81
11.6.1. Immediate report			. 81
11.6.2. Complete report	-	٠	. 82
12. Implementation of a major hazard control system			. 83
12.1. General			
12.2. Identification of major hazard installations			. 83
12.3. Establishment of a Group of Experts			. 84
12.4. On-site emergency planning			. 84
12.5. Off-site emergency planning			. 85
12.6. Siting and land-use planning			. 86
12.7. Training of government inspectors			. 86
12.8. Preparation of check-lists			. 87
12.9. Inspection of installations by government inspectors		٠	. 88

		·	.0	ntents
	12.10. Inspection of installations by specialists12.11. Actions following the evaluation of safety reports			. 89 . 90
Ann	exes			
[. [].	Use of consultancy services			. 93 95
nde	x			103