

Pressure Vessel Inspection Requirements

All pressure vessels have hazard ratings which are calculated on a hazard rating calculation as per AS:4343 (pressure equipment – Hazard) and the manufacturers specs EG Volume x Pressure x fluid type .

Pressure vessels categorised with a hazard level of A,B or C must be registered with Worksafe however vessels with a hazard level categorised as a D or E Hazard do not require registration.

Mine site requirements override these category's and will often require all vessel's regardless of hazard level to be registered before supply.

Pressure vessel Inspection requirements and calculations can be seen in the tables below. Compressed air receiver vessels (dependant on size and pressure rating) and Air/Oil Separator vessels require inspection by an in-service inspector every 2 years and an internal inspection every 4 years.

**TABLE 4.1
INSPECTION INTERVALS**

1	2	3	4			5	6
			External inspection (see Notes 2 and 3 and Clause 4.4.4.1)	Internal inspection		Nominal interval (see Clause 4.4.4.1)	Extended interval (see Clause 4.4.4.1)
				Inspection interval, years			
1	BOILERS (see Note 12)						
1.1	Electric boilers	Y	N	2	4	8	
1.2	Coil-type forced circulation boilers	Y	N	2	(see Note 15)		
1.3	All other boilers	Y	Y	1	1	4 (see Note 4)	
2	STEAM PRESSURE VESSELS						
2.1	Jacketed vessels						
	$pV \leq 30$ MPaL	N	N		(See Note 14)		
	$pV > 30$ MPaL	Y	Y	2	4	8	
2.2	Other steam pressure vessels (see Appendix S for deacrators)						
	$pV \leq 30$ MPaL	N	N	(see Note 14)	(see Note 14)		
	$30 < pV \leq 100$ MPaL	Y	N	(see Note 14)	(see Note 14)		
	$pV > 100$ MPaL	Y	Y	2	4	8	
3	VESSELS WITH QUICK-ACTUATING CLOSURES						
3.1	Containing gases (including steam)						
	$pV \leq 15$ MPaL	N	N		(see Note 14)		
	$pV > 15$ MPaL	Y	Y	2	4	8	
3.2	Containing liquids						
	$pV \leq 100$ MPaL	N	N		(see Note 14)		
	$pV > 100$ MPaL	Y	Y	2	4	8	
4	FIRED HEATERS OR CONVECTION BANKS	Y	Y	2	4	8	
5	WATER HEATERS	Y	N	4	12	12	
6	COMPRESSED AIR CONTAINING VESSELS						
	$pV \leq 100$ MPaL	N	N		(see Note 14)		
	$100 < pV \leq 150$ MPaL	Y	N		(see Note 14)		
	$pV > 150$ MPaL	Y	N	2	4	12	
7	STATIC STORAGE VESSELS (see Notes 5 and 17)						
7.1							

15.4					
Other transportable vessels (see Note 10)	Y	Y	1	5	5
16 Pressure relief devices	Y	Y	1	(See Note 18)	
17	Heritage boilers and pressure vessels (See Appendix Y)				

LEGEND:

p = Design pressure, in megapascals

9.3 Hazard Level C	Y	Y	2	4	12
9.4 Hazard Level D	Y	N	4	(See Note 14)	(See Note 14)
10	AUXILIARY VESSELS (see Note 7 and 17)				
10.1 Accumulators					
$pV \leq 100$ MPaL	N	N		(See Note 14)	
$100 < pV \leq 200$ MPaL	Y	N		(See Note 14)	
$pV > 200$ MPaL	Y	Y	2	12	12
10.2	Other auxiliary vessels containing corrosive, toxic or flammable contents and except those covered Note 19.				
	Y	Y	2	4	12
10.3	Particular auxiliary vessels (See Note 19)				
	Y	Y		(See Note 19)	
11 REFRIGERATION AND AIR-					

Relief Valves

Relief valves require inspection yearly by a competent person. This can be done in house and just cover the basics (visual inspection, manual test relief, general checks etc). Some companies just add relief valve checklists to their existing Compressor service/inspection checklists to cover this.

Relief valves require full testing (bench set pressure testing and certification) at intervals no longer than 4 years.

Annual PRV checks/inspection

4.7.3 On-line external visual inspection

On-line external visual inspection of pressure relief devices shall be carried out by a competent person, at a nominal interval of 1 year. Regular operating surveillance should be carried out in addition to this.

4 yearly test

The test interval shall not exceed the internal inspection interval for the item of equipment that the pressure relief device is designed to protect, as listed in Table 4.1. Extended intervals may be applied as per Note 1 to Table 4.1.

Minimum Documents to keep on file and be available with plant

- MDR (Manufacturers Data Report)
- Individual Plant Registration (if C Hazard level or greater)
- Australian Design Registration (if D Hazard level or greater)
- Pressure Relief valve test certificate
- In-service Inspection Report and Cert
- Operating Instructions/manuals
- Routine & Pre-operation inspections/checklists

There are other documents which should be obtained and kept on record such as original Hydrostatic test certs, Mill test certs, QA/QC docs, Commissioning reports etc