



Labour Department

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勞工處

Boilers and Pressure Vessels Division
鍋爐及壓力容器科

10th August, 2018

Circular No. 1/2018
Instructions to Appointed Examiners
Pressure unit on the pressure gauge – Boilers and Pressure Vessels Regulations
(Cap.56A)

Regulations 3(1)(a)(iii), 4(1)(c) and 5(1)(c) of the Boilers and Pressure Vessels Regulations, Cap. 56A require every boiler, steam receiver and air receiver respectively shall have attached to them a correct pressure gauge indicates the pressure in the boilers or pressure vessels in pascals or multiples of pascals. These regulations came into force by the Boilers and Pressure Receivers (Amendment) Bill 1988. Prior to the amendment of the regulations, both the Imperial units and their equivalent in metric units were accepted, i.e. pressure unit in pound per square inch (PSI) or pascals (Pa).

After 30 years, we still found some pressure gauges of the pressure equipment not showing pascals or multiples of pascals as required. Although all pressure units can be converted to pascal by multiplying with specific factors, it is not accepted as “multiples of pascals” according to recent legal and expert advices unless the factors are integer powers of 10, i.e. 10, 100 or 1,000...

Pressure units, such as PSI, atm. and kgf/cm^2 (kg/cm^2) can be converted from pascal by multiplying it with 6,894.76, 101,325 or 98,066.5 respectively. As the factors are not integer powers of 10, they are not accepted as “multiples of pascals”.

The hectopascal, kilopascal and megapascal are certainly “multiples of pascals”.

Another common pressure unit - Bar which can be converted to pascal by multiplying it with 100,000. As the factor is an integer powers of 10, it can be accepted as “multiples of pascals”, provided that a conversion marking, eg. “1 Bar = 10^5 Pa” or “1 Bar = 100 kPa” or equivalent is indicated at or adjacent the pressure gauge for reading.

According to Regulation 17(1), contravention of the provisions, the owner shall be guilty of an offence and shall be liable to a fine of \$10,000 on conviction.

From 1st October, 2018, all Appointed Examiners (AEs) are reminded to look into pressure gauge unit ensuring the compliance with the requirement when the Certificate of Fitness (CoF) is issued for existing or new pressure equipment. If the AE finds the pressure unit not in compliance with the requirement, he shall render his assistance the owner to comply with the requirement. CoF shall only be issued when the AE is satisfied as what he signed on the CoF of either Form 1 “Boiler mountings examined and found satisfactory” or Form 2 “Fittings examined and found satisfactory”. In case the AE decided that this requirement cannot reasonably be

applied, he shall assist the owner to apply for exemption by filling in the Form 5A (sample attached as Enclosure 1) with the AE's recommendation letter and survey report to state the reason for the Authority's consideration at least 2 weeks before the AE intends to issue the CoF.

For any new pressure equipment applying for registration, please note that ticking the box R3, R4 or R5 in the section of Safety Fitting on the Supplementary Action Sheet for Pressure Equipment Registration means the AE confirms all requirements in Regulation 3, Regulation 4 or Regulation 5 are fully complied including the requirement for the pressure gauge unit.

If exemption for the pressure gauge unit not being pascals or multiples of pascals is applied for the new pressure equipment, please also tick the box "PG" in the section of Check Code in the new Supplementary Action Sheet (refer to Instructions to AE 2/2018).

It is the responsibility of AE to ensure that an appropriate conversion chart, which can be used to convert the pressure units from the pressure gauge to pressure in kilopascals, shall be posted nearby the pressure gauge for reference. It shall be maintained in satisfactory condition, before issuing or endorsing the CoF to this exempted equipment.

For any queries, please feel free to contact the undersigned at telephone number:
3107 3440.


(KWAN KAN FAT)

for Boilers and Pressure Vessels Authority

Enclosure 1: Sample Form 5A for exemption of pressure gauge unit.

Distribution: All Appointed Examiners

c.c. DC(OSH), AC(OS)



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Boilers and Pressure Vessels Division
鍋爐及壓力容器科

18 December 2002

Circular No. 3/2002
Instructions to Appointed Examiners

Registration of Oil Separator/Filter installed in Rotary Air Compressor Under the Boilers and Pressure Vessels Ordinance (Cap. 56)

This Circular serves to clarify the statutory interpretation of 'air receiver' as it applies to oil separator/filter installed in rotary air compressor.

There have been some concerns regarding whether the oil separator/filter unit installed in some rotary air compressors, falls within the definition of 'air receiver' provided in section 2 of the Ordinance. It is noted that the main function of providing an oil separator/filter in these compressors is to remove the oil content from the compressed air.

Based on the definition provided under section 2 of the Ordinance, an oil separator/filter unit will NOT be considered as an 'air receiver' if both of the following features are present:

- (a) there is no isolating valve(s) and/or similar device(s) fitted between the oil separator/filter and the air compressor; AND
- (b) the provision of an unloading device or other similar arrangement to vent the air content of the oil separator/filter during the stoppage of the air compressor.

With immediate effect, for new registration application, Appointed Examiners are required to determine whether the oil separator/filter falls into the definition of 'air receiver' utilizing the above guideline.

For registered oil separators/filters, during the next periodic examination, Appointed Examiners are required to determine whether the equipment fall into the definition of 'air receiver' and to advise the equipment owner accordingly. It remains optional for the equipment owner to decide whether to continue the registration. If de-registration is contemplated, owner's application shall be supported by a report from the Appointed Examiner stating the fulfillment of above guideline.

(C. K. Lee)
for Boilers and Pressure Vessels Authority

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