



## Chemwork

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### Whether to use 2/3 rule or 10/13 rule?

**Murali Muthu**  
Professional

My understanding is

Rule says that the tube rupture scenario can be neglected when the test pressure of the low pressure side is greater than or equal to the MAWP of the high pressure side.

\* 2/3 value from 100/150 (test pressure of lower side to higher side)

\* 10/3 value from 100/130 (test pressure of lower side to higher side).

Use of 2/3 rule or 10/13 rule as follows:

1. For exchangers designed and fabricated according to the old version, use 2/3 rule (100/150). For exchangers designed and fabricated according to the current code, use 10/13 rule (100/130).

2: If the test pressure of equipment is 150% MAWP use 2/3 rule and if the test pressure of the equipment is 130% MAWP use 10/13 rule.

Can anyone tell me, why the test pressure is reduced from 150% to 130%?

Regards,

Murali

Process Engineer

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[Murali Govindaraj](#) likes this

2 comments



**Vyankatesh Belapurkar**  
Process Head

Dear Murali

Vyankatesh

as per my understanding, earlier codes of ASME sec.VIII div.1 kept test pressure 150% of design value. Since last 15 years or so, the revised code of ASME sec.VIII div.1 have reduced this test pressure value from 150 to 130%. Thus API code 521 is linked to ASNE sec.VIII div.1.

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**Lutfhi L**  
Offshore Operation Engineer at Pertamina Hulu Energi ONWJ Ltd

Murali,

Eventough the hydrotest pressure is reduced from 150% to 130% of design pressure. But this new hydrotest pressure is called "uncorrected hydrotest pressure". We must use "corrected hydrotest pressure" which is defined as "uncorrected hydrotest pressure multiplied by ratio of stress value at test temperature to the design temperature". It is more realistic rather than just using 150% DP. For more detail, you can open API std 521 2008 section 4.3.2. Hope it helps.

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