



## Chemwork

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### Providing XV on instrument air header to the GTG

**Ashraf Abufaris**  
Process Engineer at Petrofac

In one of our recent project, it has been decided to add an XV on the IA header to cut off IA supply to plant user and supply the requirement of GTG in case of low pressure in IA header instead of providing a dedicated receiver to GTG. My opinion was that the failure of this valve ( Mechanical) will create hazardous situation in the plant and it will be more economical to provide a dedicated vessel. Please share your opinion

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Mojtaba

**Mojtaba Habibi**  
Process Engineer at Wood Group

Could you please clarify for your case if IA demand for GTG is intermittent or continuous? If the demand is intermittent in which case you need this IA?

In one of the previous projects the GTG vendor has asked for provision of instrument air during plant start up and we provided a dedicated small instrument air package with diesel driven air compressors.

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Ashraf

**Ashraf Abufaris**  
Process Engineer at Petrofac

Dear Mojtaba

The IA consumption for GTG is continuous and we have the same case as yours, during start up we have provided a small IA compressor and dryer package. But, during normal operation the IA GTG demand will be met from the normal IA header supplying the demand to plant users.

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Mojtaba

**Mojtaba Habibi**  
Process Engineer at Wood Group

1. I suppose you should have very low pressure shutdown (with 2oo3 voting) triggering plantwide shutdown. If so, where this PSHL is positioned at your IA system with respect to this XV?

2. Based on your system design is this possible for remote opening/closing of this XV from CCR?

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Wilfredo

**Wilfredo Garcia**  
Process Specialist at Ecopetrol

Dear Ashraf,

In any process plant you're not allowed to lose IA, if the IA header has a low pressure, then you have to install an IA back up system, this source may be from the PA header or from the N2 header or both.

Cheers,.

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**Ashraf Abufaris**  
Process Engineer at Petrofac

Ashraf

Mojtaba

1. Several PALLs are located upstream of this XV as follow:

- a) PALL-1 Will close Plant air XV
  - b) PALL-2 will close nitrogen XV
  - c) PALL-3 will close this IA XV to plant users and initiate ESD-1 not including trip of GTG.
2. No manual closure of this XV from CCR is allowed .

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**Ashraf Abufaris**  
Process Engineer at Petrofac

Ashraf

Dear wil

Back up IA receiver with additional plant air back is provided but all the headers join upstream of this XV to plant users and to GTG header. My opinion is to have a dedicated receiver to GTG with back up from plant IA header and this XV should be omitted. Please share your opinion !

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**Tamer Saad Abdel Salam, M.Sc, MBA**  
Lead Optimization Engineer at QCLNG

Tamer  
Saad

I agree with your opinion Ashraf, as installing this kind of device (XV) will as additional probability of failure which could lead to loss of IA to GTG while the instrument air header of the plant is at normal pressure.

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**Mojtaba Habibi**  
Process Engineer at Wood Group

Mojtaba

Dear Ashraf Abufaris,

Considering all of the above mentioned points I agree with your idea. Why you are not using the small dedicated package (which is considered for start up) as back up during normal operation?

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