QUESTION AND ANSWERS FOR:

RFB #17-25 Three (3) Indirect Natural Gas Fired Water Bath Heaters, 4/21/17

Group 1

- 1 Process Gas composition including the water content. (see attachment RFB #17-25 Q&A.XLS)
- 2 Minimum and maximum ambient temperatures and the site elevation. (see attachment RFB #17-25 Q&A.XLS)

Group 2

1. No Baso Safety valve required (highly recommend this safety feature).

This can be offered as an additional feature and listed in the exceptions.

2. No 3 VDC Ignitor required. (it's optional but without it need you a flaming rag)

This can be offered as an additional feature and listed in the exceptions.

3. Expansion Reservoir- Normally this is an 8" pressure /vacuum fill hatch not 2". Please advise.

The original RFB contained a typographical error. The glycol fill hatch is to be 8" in diameter.

4. No size is specified for the tank. i.e. 37 gallon, 18" x 3' Please advise.

The manufacturer shall specify size of tank based on the needs of the heater.

5. Burner very little is specified but we strongly suggest including hinged flame arrestor which allows 1 man to inspect rather than 2 or more.

We agree, the heater should include a Hinged Flame Arrestor.

6. Stack- Strongly suggest Raincap downdraft diverter be included.

This can be offered as an additional feature and listed in the exceptions.

7. Recommend addition of flange stack tee to facilitate cleaning and inspection of fire tube without stack removal.

We agree, the heater should include a flange stack tee.

8. Please clarify maximum allowable pressure drop.

The maximum allowable pressure drop is 10 PSIG.

9. Heat flux- Please clarify maximum allowable Heat flux. API-12K uses < 12,000 btu/hr ft 2 as max standard. The higher the heat flux the more stress is put on metal during operation resulting in shorter equipment life.

Heat flux must be below 12,000btu/hr ft²