From: Sent: To: Subject: Evan Vokes Monday, August 09, 2010 4:08 PM Salvatore Delisi; YIN Qu; Robert Lazor RE: TES-WELD-AS-US version 02.doc

This is a problem we run into all the time and different construction managers handle it different ways and some inspectors would like a statement in the spec

From a stress point of view, this is of concern to Mike Martens as the welds may handle a lot of load and as Sal stated you don't want a crazy amount of welds without a good reason especially since they are often DWSI gamma shots. Even though a minimum of one diameter is good practice, it is not always practicable when you are welding in a station so we always have some short ones.

Short pups welded to components are really hard to line up on large diameter pipes but are sometimes necessary but short pups welded to each other is just poor practice.

When we did Hardesty interconnect, the correct answer to one of these problems was to cut the pipe out and replace it with the correct length.

Another item that is not in the spec is flame straightening using shrinkage principles even though API has an RP. This is poor practice and should be excluded from your contract as an acceptable method of obtaining a pump alignment. Our specifications and the code to not make strong statements on wrinkle bends as they are know to just be poor practice and this is in the same category of poor construction methods.

From: Salvatore Delisi ent: Monday, August 09, 2010 12:37 PM To: YIN Qu; Robert Lazor Cc: Evan Vokes Subject: RE: TES-WELD-AS-US version 02.doc

Not from any known specification.

It was a 'rule of thumb' that ANR has used in the past and practice I've used in a former lifetime to keep the number of welds from becoming unreasonable.

Welds closer thar 50 mm should definitely be avoided but the remainder is a way to keep the number and locations of welds in check.

Sal

From: YIN Qu Sent: Monday, August 09, 2010 1:32 PM To: Salvatore Delisi; Robert Lazor Cc: Evan Vokes Subject: RE: TES-WELD-AS-US version 02.doc

Is this in a spec? should we be adding this to the welding spec? the exception would be if design calls for a closer spacing between the two welds, then it's acceptable, correct?

From: Salvatore Delisi **Sent:** Monday, August 09, 2010 11:24 AM **To:** YIN Qu; Robert Lazor

Cc: Evan Vokes Subject: RE: TES-WELD-AS-US version 02.doc

Yin,

- Minimum distance: Not less than 12" (30 cm)
- At least 18" (45 cm) distance for NPS 14 and below
- At least two pipe diameters distance for NPS 16 and above

A 'case by case approval from MEGaQM' clause could be added to allow flexibility for transition pups, etc.

Sal

From: YIN Qu Sent: Monday, August 09, 2010 1:05 PM To: Robert Lazor; Salvatore Delisi Cc: Evan Vokes Subject: RE: TES-WELD-AS-US version 02.doc

Thanks guys.

I also have a question: is there any comment in the spec regarding minimum spacing between welds during construction?

From: Robert Lazor Sent: Friday, August 06, 2010 4:50 AM To: YIN Qu Cc: Evan Vokes; Salvatore Delisi Subject: RE: TES-WELD-AS-US version 02.doc

I will have to look on my return trip tonight.

From: Salvatore Delisi Sent: Friday, August 06, 2010 3:24 AM To: YIN Qu Cc: Evan Vokes; Robert Lazor Subject: FW: TES-WELD-AS-US version 02.doc

Yin,

Per your request, I've forwarded a marked-up copy of TES-WELD-AS-US.

At this time, I have no way of knowing where this document stands in the review process or whether the changes suggested will be part of the final document.

Sal.

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