

From: JT Vaughn <jvaughn@industrialheat.co>
To: Tom Darden <tdarden@industrialheat.co>
Sent: 10/22/2013 2:31:05 PM
Subject: 6-cylinder -- why not just build a one cylinder unit?

Tom: I was talking with TBD earlier today and he said he has reservations about whether or not the heating end of the 6-cylinder unit is designed and built to the appropriate specs to be able to withstand the temperatures and pressures it will need to endure. ♦

Also, we are likely going to spend \$30-50k to design, build and instrument the 6-cylinder unit (the heat transfer fluid alone is going to cost between \$12-16k delivered). ♦

If AR is now set on building single cylinders to handle 3-phase power, should we consider building a much smaller scale version of the 6-cylinder, which entails only a single cylinder with 3-phase power? I imagine we would save a lot of money in doing so and the test would be much simpler, safer and maybe less prone to failure. Importantly also, we may be able to get a single cylinder unit up and running quicker than the 6-cylinder unit--especially if we have to rebuild the heating end of it. ♦

Of course, we may not want to do this b/c the the chances that the 6-cylinder unit doesn't survive the 350-day test is probably greater. But, if a single cylinder unit passes the 350-day test with a COP of >2.6, then I'm going to be almost as happy, I think. ♦

AR could be inclined to do this b/c it increases the chances that he receives his next payment. ♦

What are your thoughts? ♦

JT

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