

T1 Options Given a DOA ATE-150 Box

8/11/05

EPM

Background:

During a field trip to test the T1 equipment on 8/8/05 equipment from ATE was found DOA. The converter box arrived with loose parts rattling around in it and subsequently failed to work in the field test. Thus most of the value expected from the field trip was not possible to accomplish. (Lost government time estimated to be 6 man days.) To complicate matters ATE supplied a pressure transducer with an odd output of 0-5 V that feeds the ATE150 converter box.

Options:

To obtain flow data a way to monitor the Winter Kennedy Pressures is required. The following options are available:

Option A: Do we have any suitable pressure transducers with 4-20 ma output we could temporarily use? If so this is the obvious choice for a quick return to field testing. In the mean time we should order the transducer in option D.

Option B: Obtain an off the shelf converter for 0-5 V to 4-20 ma. Cost is \$335 and the unit could be shipped Tu-Wend -air freight. We wasted way more than that in the field trip already. Additional details on the unit will be available soon. It would be fairly easy to add some electrical filtering if needed.

Option C: Get the one Doug made fixed. We asked Roy to send the failed box back to Doug. To minimize expense we need to specifically direct Doug to NOT work on it under our funding. This option has already been a significant money pit that caught us by surprise. Going forward with a garage shop built circuit will just lead to additional money pit issues and delays. Since we can easily and quickly purchase an alternative I recommend we consider this option DOA.

Option D: Order the proper 4-20 ma output transducer and use it. This option eliminates the need for the garage shop box provided by ATE. As part of this option consider changing out the National Instruments A/D board to one with a 16 bit resolution vs the 12 Bit resolution now installed. A 16 bit, or better, A/D should have been used in the first place.

Notes:

Remember that I told everyone that we should not have gone with the garage shop custom designed box because the kind of problem that we had was a way too likely. Against my wishes we did it anyway in the hope of getting results faster and to pacify Doug.