**Harmonization of High Pressure Gas Reference Values – An Alternate Proposal**

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In the Spring of 1999 Germany and the Netherlands announced a decision to harmonize their national measurement standards for high pressure natural gas. This metrological solution was implemented to solve an economic problem. More recently France and Denmark have joined into the harmonization which is currently being proposed as a new international standard. This paper contains the outline of a proposed alternative solution where the economic transactions are separated from the metrology.

The agreement raises several issues that concern a commercial calibration facility such as CEESI. The harmonized value is not applicable to customers in industries that do not measure natural gas. This situation raises a question of maintaining separate standards for different industries. Further complicating the situation is the regular use of compressed air as a surrogate fluid for natural gas applications The discussion continues with a comparison of the harmonization of time. Interesting similarities and differences are revealed from the comparison.

The discussion concludes with an alternate proposal. Currently the harmonization represents a significant barrier to entry for a country such as Australia because a large laboratory is required. Meanwhile few countries have an installed base adequate to commercialize a facility. The alternative proposal is use an artifact to establish traceability for high pressure natural gas calibrations. The well understood critical flow venturi is proposed to serve as an artifact. The remainder of the paper consists of a discussion of how such an approach might be implemented.