

Measurement matters

The following provides an update on the latest developments within the Energy Institute's Hydrocarbon Management Committee (EI HMC).

The EI's HMC continues to work with the API (American Petroleum Institute) under the Phoenix Agreement. The agreement was signed in February 2006 and marked a major step forward in the development and harmonisation of petroleum measurement standards worldwide. Under the agreement, the API and EI work together with the aim of producing joint standards in all areas of petroleum measurement. Over the course of the next few years this process will lead to a single set of standards for international use.

The joint committee formed from the API COPM (Committee on Petroleum Measurement) and EI HMC manages the work programme with projects being carried out by joint work groups operating under the existing sub-committees within each organisation.

During the third week of October, members of the EI HMC travelled to Atlanta, Georgia, US, to attend the API COPM meeting. This is a week-long set of meetings, of all petroleum measurement committees under API COPM along with most of their work groups. Discussions covered most active work items, many of which are being completed jointly with the EI following the nomination of experts onto these joint groups.

During a breakfast meeting, Paul Harrison (EI Consultant) and Paula Watkins (API) gave a well-received presentation on API/EI joint working and the lessons learned over the past two years. This was attended by 136 hydrocarbon management experts and included tips on joint working contributed by successful work groups who are already producing documents. The presentation also assisted in bringing the Phoenix Agreement to the front of people's minds again and further spread the word to new API COPM members.

On the final day of the meetings the API/EI Joint Committee Hydrocarbon Management (JCHM), of which the EI holds the Chair, held its seventh meeting (the third face to face) under

the Phoenix Agreement. It was a huge success, with attendees from both organisations, representing companies such as BP, Chevron, Colonial Pipeline, ConocoPhillips, ExxonMobil and Shell. Discussions focused on proposals for new work items to be pursued jointly. These include:

- Calibration of upright cylindrical tanks using the optical reference line method.
- Calculation of base prover volume using master meter method.
- Upstream allocation methodologies and technologies.
- Electronic gas measurement.
- Determination of volume correction factors for biodiesels.
- Marine loading loss estimation – update of existing methodology followed by field verification.
- Management of measurement support guideline documents for the upstream sector.
- Load and discharge vessel experience factor investigation.
- Hydrocarbon management in marine transportation.
- Manual sampling.

Established API/EI workgroups

A number of API/EI joint work groups are currently tackling 14 documents including:

- Ch4/HM10/12 Meter proving (ISO 7278)
- Ch8.2/HM6/ISO3171 Automatic pipeline sampling (ISO 3171)
- Ch10.10 The determination of water in crude oil and products using online water monitors
- Ch17.10 Measurement of LNG, LPG and chemical gases on marine vessels (soon to be published)
- Ch17.12/HM51 Procedures for bulk liquid chemical cargo inspections by cargo inspectors (soon to be published)
- Ch20.1 Allocation measurement
- API Pub 2514 Atmospheric hydrocarbon emissions from marine vessel transfer operations
- API MPMS Ch17.11/HM52 Gauging and sampling under closed or restricted conditions
- Ch14.3.1 Gas measurement – expansion factor test work
- Ch22.4 HM59 Testing protocols for pressure, differential pressure and temperature measuring devices
- Ch9.4/HM8 Online density measurement (ISO DIS 9857)

API/EI and ISO liaison

Following the recommendation to roll the ISO Petroleum Measurement Technical Committee 28 SC (sub-committee) 3 and SC6 into SC2, the first meeting of the new SC 2 was held on 26 October, with representatives from the Netherlands, UK, US, Sweden, Japan and Indonesia.

Work continues on API/EI liaison with ISO and the logistics of moving API/EI documents into ISO. To help illustrate this, a flow chart was produced prior to the meeting to show the proposed mechanism for the API-EI-ISO interface for developing petroleum measurement standards. This received good support and is a major step in paving the way for the three organisations (API/EI/ISO) to cooperate more closely and avoid duplication of effort and multiple documents.

Further EI HMC developments

Following the HMC-4 Marine Transportation meeting in Singapore last year, Shell and BP representatives and others in the Far East suggested that the EI set up a measurement forum in the region. Subsequently, a proposal was written and another meeting was held in Singapore in September with local member representatives, specifically to determine whether the forum would benefit the industry locally and, if so, if the local representatives would be prepared to provide their support to develop the forum. The meeting was very successful and it is planned for an initial forum meeting to be held in 1H2008.

To assist the EI HMC in recruiting volunteers to actively contribute to the joint API/EI work groups, an Expert Register has been set up for people to register their interest/expertise in various areas of hydrocarbon management. The register is then used to recruit experts when a new working group is formed. ●

If you would like more information on the EI's Hydrocarbon Management programme, would like to record your interest on the Expert Register or are interested in becoming an active contributor, please contact Kerry Hoad, e: khoad@energyinst.org.uk

Information on the EI Hydrocarbon Management work can be found at www.energyinst.org.uk/hydrocarbonmanagement