Report On 'Half-Day Course On Applied Line Sizing In Process Plants'

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A course on applied line sizing in process plants organised by the Chemical Engineering Technical Division was attended by 33 participants. Its objective was to provide and share with the participants, knowledge and related hands-on experience in practical fluid flow, including applied line sizing, to facilitate the undertaking of tasks relating to design and/or the technical performance monitoring of process plant systems.

The course presenter was Ir Hj Mohd Nor Abdul Basar who had over 28 practising years of process design and engineering experience, including 15 years at a petroleum refinery and a petrochemical plant.

The course started with a refresher on the fundamental design parameters of fluid flow – velocity head, pressure drop, equivalent length, recommended velocities, two-phase flow, compressible flow, sonic velocity, commonly applied fluid physical-chemical properties, etc. It then focused on analysing two-phase behaviour in fluid flow referring to some correlations, and also the sharing of an actual case application involving pressure drop calculation.

After that, the session went into line sizing application involving flow restriction and transfer equipment. It discussed line sizing in connection to metering (orifice), control valve and safety relief valve, pumping and compression, as well as the sharing of several actual case application. ■