

# Centres Of **EXCELLENCE**

Annual Report 2009



# Steel Technology Centre (STC)

The Steel Technology Centre (STC) was established to promote the effective use of steel in construction and manufacturing industries in Malaysia. The centre is based at level 1, Block C09, Faculty of Civil Engineering, Universiti Teknologi Malaysia, Skudai, Johor. The location is very strategic due to the easy access to a large pool of experts, related sources and also its close proximity to Singapore. There is a number of qualified academic staff or fellows in multi-disciplinary fields such as science, mechanical and civil engineering who teach and conduct research and consultancy on subjects related to steel including metallurgy, production and building structural analysis and design.

The current research area at STC includes structural engineering and computational mechanics. Structural engineering can be divided into semi-rigid construction, cold-formed steel construction, industrialized building system (IBS) and composite construction. In computational mechanics, the research involved solid mechanics, fluid mechanics, bio-mechanics and vibration design. Complete back-up facilities for all kinds of steel research and consultancy activities have been made available to STC. Several laboratories for steel testing, production and metallurgy are also equipped with high tech and up-to-date equipments.

In 2009, the Steel Technology Centre has conducted/jointly organized 5 seminars and conference, 2 colloquiums, 1 workshop and 1 technical visit to Institut Teknologi Bandung (ITB) and Universiti Indonesia (UI) to promote the latest technology and development in steel construction. All these activities receive much attention and appreciation from the industries and universities, which is the aim of the centre. Throughout 2009, STC managed to generate a total of RM20,000.00 from the talks, seminars and short courses.

STC has been actively conducting research, development and commercialization activities, aiming to improve and enhance the existing steel technology. Throughout 2009, STC has managed 6 research projects amounting to RM745,195.00. From all contract research projects, MOSTI was the biggest contributor for the research grant, with a total allocation of RM435,295.00. Other research funds are from the Fundamental Research Grant Scheme, FRGS for a total RM189,900.00, and a contract research with Kiswire Sdn. Bhd. (RM120,000.00).





Throughout 2009, STC has conducted over 20 consultation works and structural testing with local industries, which generated a total income of RM74,400.00. The local industries consist of steel manufacturers, contractors and consultant firms that seek professional advisory and consultancy on subjects related to steel including metallurgy, production and building structural analysis and design.

In 2009, STC has published 1 book, 3 international journal papers and 2 international proceedings. Meanwhile, STC is actively involved in research publication, where 27 international journal papers have been submitted and is currently in the process of drafting 3 books.

In terms of the relationship with industries and other related bodies, STC has been supported by a number of organizations and firms. Among them is the Steel Construction Institute (SCI),

United Kingdom which is one of the world's leading organizations in steel construction. International linkages with Imperial College (UK), University Illinois (USA), Queensland University of Technology (QUT) (Australia), and Srivijaya University (Indonesia) provide assistantship to STC in any matter related to steel. This may include the technical expertise and vast information pertaining to steel. Along with that STC is also enjoying the support of the local industries especially Kemuning Structures Sdn Bhd, Kiswire Sdn Bhd, Pryda (M) Sdn Bhd, Perwaja Steel Sdn Bhd, Antara Steel Sdn Bhd, TWP Sdn Bhd, and Tong Yong Metal Sdn Bhd to ensure its success.

