

Glulam Application Par Excellence



Ir. Chin Mee Poon
www.facebook.com/
chinmeepoon

Ir. Chin Mee Poon is a retired civil engineer who derives a great deal of joy and satisfaction from travelling to different parts of the globe, capturing fascinating insights of the places and people he encounters and sharing his experiences with others through his photographs and writing.



We are pleased to announce that a travel coffee-table book, published by IEM, is now available for purchase at the Secretariat:

"A Globe-Trotting Engineer's Footprints"
by Ir. Chin Mee Poon

The selling price is as follows:
Members : RM50
Non-Members : RM55

All proceeds will go to the IEM Building Fund.

For more information, kindly contact IEM Secretariat via telephone 03-7968 4001 and email address at : sec@iem.org.my

Thank you.

When my wife and I were back packing in France in late spring of 2015, we had the good fortune to visit an outstanding building which incorporated the extensive use of glulam in its design.

Regular readers of this column will remember that I briefly introduced glulam in my article "Glulam – A Metamorphosis Of Timber" (Jurutera, June 2009).

Glulam, or glued laminated timber, has distinct advantages over solid timber. It widens the scope of timber usage by taking on curved and odd shapes, made possible through the manufacturing process. It also reduces timber wastage as knots and other minor defects in each component board can be removed without affecting the rest of the board.

We arrived in Metz in northeast France by train and found a comfortable room within our budget in a hotel directly facing the railway station. About 10 minutes' walk away from the back of the station was an avant-garde building, Centre Pompidou-Metz. From afar, its roof, glistening white in the sun, looked like a stingray swimming gracefully. The building is a masterpiece by famous Japanese architect Shigeru Ban (坂茂) who found the inspiration for the roof design in a Chinese straw hat he found in Paris. Construction started in 2006 and the building was officially opened on 12 May, 2010.

Centre Pompidou-Metz is a museum of modern and contemporary arts and is a branch of Centre George Pompidou of Paris opened in early 1977.

The building houses 3 galleries, a theatre and an

auditorium, with a total usable space of 5,000 sq.m.

The most outstanding part of the building is, of course, the roof. The hexagonal roof with a total surface area of 8,000 sq.m. is made up of 16km of glulam strips that cross each other curvilinearly in 3 directions to form hexagonal and triangular wooden units resembling the neatly woven bamboo strip pattern in a Chinese straw hat. The entire curvilinear roof lattice is covered with white fibreglass sheet and a coating of Teflon, giving the roof its distinctive resemblance to a graceful stingray.

Teflon is a product based on polytetrafluoroethylene (PTFE) with the exceptional qualities of being hydrophobic and highly non-reactive. Thus, the roof of Centre Pompidou-Metz is self-cleaning and durable and allows interior light to penetrate, making the timber lattice clearly visible from outside at night.

Shigeru Ban is well known for his innovative work with paper, particularly recycled cardboard tubes used to quickly and efficiently house disaster victims. The Cardboard Cathedral in Christchurch, New Zealand, built as a stop-gap venue for church members after the original cathedral was badly damaged in the 2011 earthquake, is a remarkable example of such a project. ■

