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## DESIGN APPROACH & MANAGEMENT



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### **PHILOSOPHY & APPROACH**

#### **CULTURE**

**Web Structures nurture a research culture within the practice which encourages value added solutions for all projects undertaken.**

Employing diverse talent from the UK, Europe and Asia, Web Structures provide quality consultancy in civil, structural and related engineering disciplines. The practice has regional offices in Singapore, Malaysia and Indonesia, with a European office based in London.

High-quality engineering solutions are consistently created for every project. Web Structures' participation in award winning bridges, resort hotels, condominiums, commercial and industrial projects, and selected privately-owned residences – demonstrates an in-depth knowledge of the properties of all building materials and the engineering principles involved in their efficient use. This knowledge enables Web Structures to provide solutions which stretch the boundaries of existing work practices.

A specialist design service deals with international product manufacturers and suppliers and regularly assists local and international contractors via the submission of alternative design proposals at tender stage. Expert witness advice is offered to law firms involved in litigation disputes as an additional service.



#### **CREATIVE CONCEPTS**

**Web Structures consider safe, buildable and economical structural engineering to be the expected norm. Innovation and creativity are the additional essentials associated with the practice.**

A proactive attitude, typified by complete participation in the early stages of a project, guarantees innovative solutions to initial engineering tasks that add value to the project at an early stage and save costs in the long term.

After ensuring the development and consolidation of an overall structural concept which fulfils the project's needs and is responsive to all of its requirements, Web Structures concentrate on the details

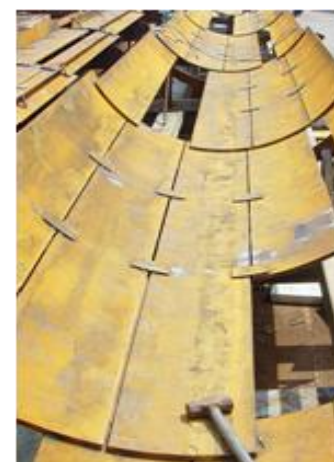


#### **INNOVATIVE DETAILS**

**Web Structures' ability to predict the behavior of structural materials in any given situation means that materials can be manipulated so that details can be 'articulated' or 'suppressed', depending on the specific requirements of each project.**

Attention to detail is a recognized trademark of Web Structures projects. Web Structures engage in the assimilation of all available information concerning a project. This material is then evaluated and reassessed in conjunction with original research commissioned by Web Structures. A report which draws objective conclusions from a solid knowledge base is then presented to the project team.

A thorough understanding of the details of every project combined with technical understanding of various structures and materials guarantees a project's success.



**SPECIALIST SERVICES**

**Web Structures’ specialist services include façade technology & curtain wall consultancy.**

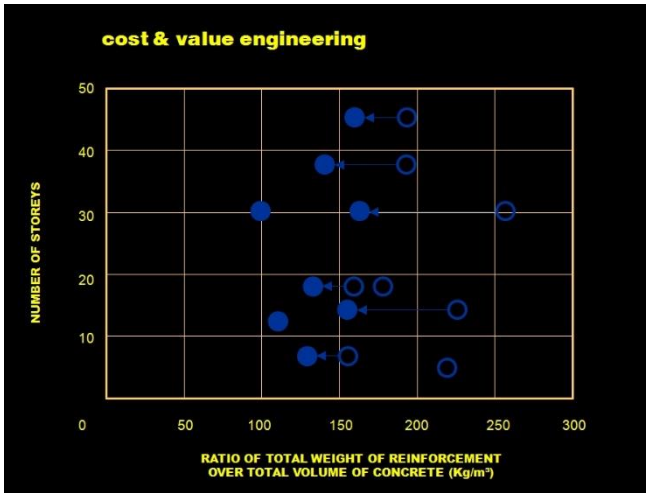
Web Structures possess state-of-the-art knowledge and experience of materials and construction techniques which can be applied to special structures. A specialist division has developed design charts for a range of proprietary Aluminium Louvers in the most severe of wind conditions. Design against punching shear failure in flat slabs using shear studs is routinely performed for a specialist manufacturer. Assessment and upgrading of existing structures is another area in which Web Structures possess expertise & know-how. The application of advanced design knowledge, which utilises composite materials, high strength concrete, and steel, pre-stressed and precast concrete, is routine. The provision of seismic and wind engineering analysis, design, and detailing is comprehensive. All these services are consolidated and finely tuned using cutting-edge design technology.



**VALUE ENGINEERING**

**Web Structures consider engineering value to be a primary concern. Successful structural economics requires the fusion of a pragmatic approach, a willingness to challenge assumptions, solid practical application and strict cost control.**

A detailed study of design load requirements is undertaken at an early stage to avoid unrealistic loading allowances. Alternative designs are then developed in conjunction with the client’s project team, quantity surveyors and/or cost consultants so that the most cost effective structure is selected for further detailed development. Throughout this process healthy scepticism of existing work practices is encouraged. Every project is viewed in an individual light, some projects require more technological solutions, some demand simplicity itself. Extensive sketches and drawings are produced to supply every piece of relevant information at every stage of the project. This enables full coordination with the consultant team and a clear transfer of information to the contractors, on time and within budget.



**PROTOTYPE TESTING**

**Design of the test specimen requires a high level of familiarity with structural behaviour – A level of familiarity which web structures possess.**

The practice is able to draw from its vast range of laboratory testing experience. Solid links with international laboratories and schools of higher education enable Web Structures to conduct prototype and other testing programs on any component. Assessment of existing structures using destructive, semi-destructive and non-destructive testing techniques, including appraisal of dynamically sensitive structures and details, forms an integral part of Web Structures’ services.

