TUBULAR TRIDIMENSIONALS STRUCTUIRES CHARACTERIZATION AND COMPARATION RESPECT TO BIDIMENSIONAL OF LAMINAL PROFILES IN BIG LIGHT BUILDINGS

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ABSTRACT

Nowadays tridimensional structuire (or spaces) of tubular righ bar of steel are in conditions to compete economical and technicly with the bidimensional of laminal profile (in colonnade or knife solution) in the industrial metalical building (industrials aisle very large and with a big light) and commercial (big commercial or diversion center –in general- that requires a big separation of pilars).

This has been caused by three foundamental causes: the significative avance in the manufacture stage, in this no only have gone down material production unitary cost, but, too an more important, his preparation for a easy assembling of the structure (with the corresponding save in hand work and time of building), caused by standard of building elements. The technology avance (that no conceptual) in the union sustem , incidental in the anterior. And, the acces to the pratica aplication of the complex system of structure calculation, in his hardware pousing (very important avance of PC pobwer) and ins his software (save of company licence in calcu tecnichlyrograms and sustancial betterment of those, in very aspects, but primordialy in the concerning of mathematical model that they incorporated: since matricial system with linear elastic material from the modern system of finits elements with linear elastiplastic material, that allow analyse the structure for plastic colapso.

This present work pretend:

Firstly:characterize in a generic and conceptual form the characteristic, in a economic and technic nivell, peculiar of thisstructure type (ETT), doing incised in his differences, avances, inconvenient and limits of utility with respect classic structure (EBP). Ilustrating in the posible with reals exemples, this is exposed in the thesis´body.

Second, analyse quantitatively, since a economis view, for values of some parameter (light, tall pilars, gravitatory loading, quality of ground to foundation).It´s interesting to take into ccount the posibility of utlize tubular spatial typology in front of the plane classic typology of laminal profiles on the basis of colonnade in sport-commercial-industrial buildings...(in general buildings with large light). This es exposed in the thesis´annex.