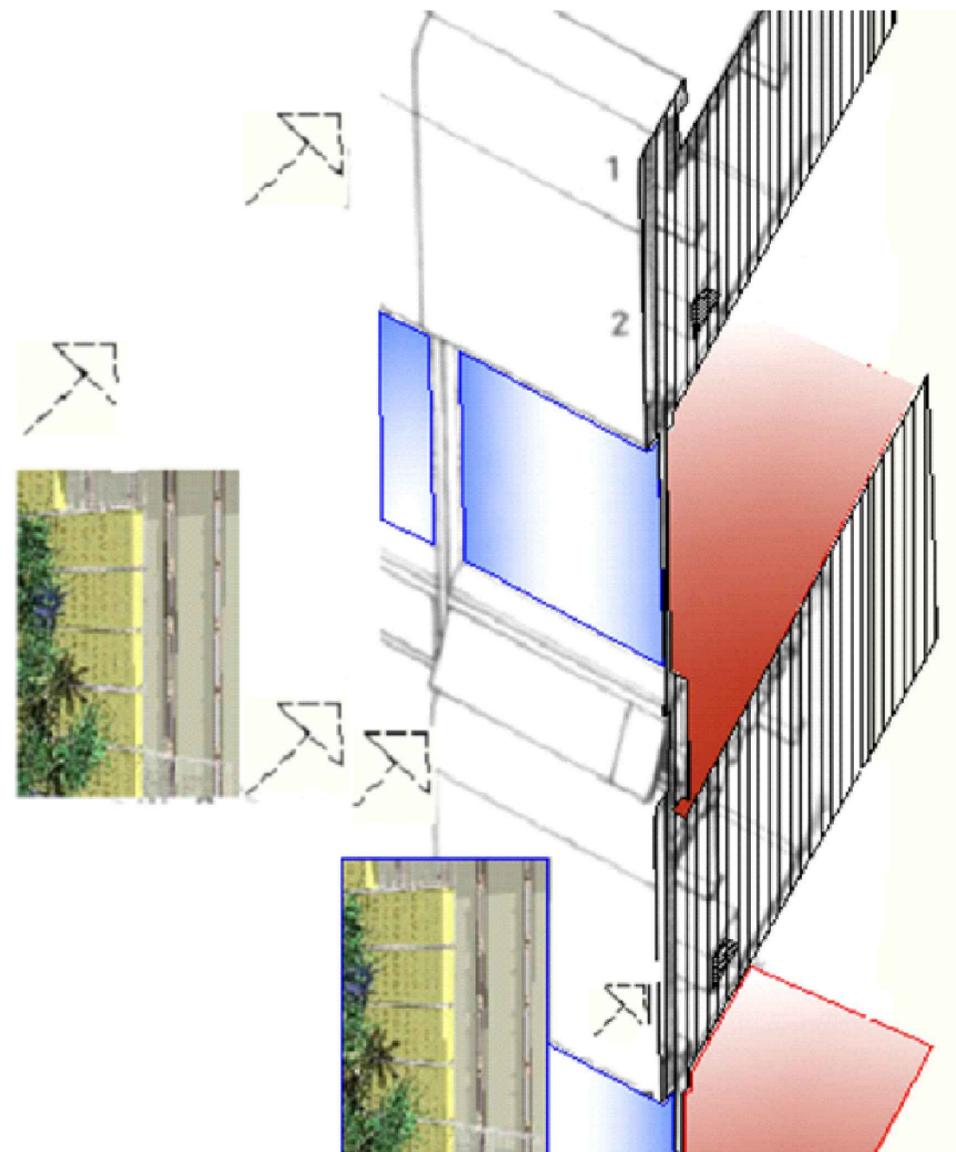


A curtain wall is projected to resist the infiltration of water and air, to influence induced for the wind and seismic forces, acting on the building and its proper forces of weight of inoperative load and essentially not to leave to have thermal exchanges between the exterior and interior. These systems of wall curtain, stop beyond benefiting of the vegetal covered one (that it functions as isolating thermal natural, are created with "extruded" aluminum members. The aluminum frame normally is interval with glass, that supplies to a building benefits such as the natural illumination. However, parameters related to the control of solar profit as thermal comfort and visual comfort are more difficult to control when using the walls of glass curtain highly. Other common elements include: turned pages rock, metallic panels, operable blinds and windows or openings. Walls curtain differ from the systems of store front where they are projected to enclose multiple floors and take in requirements of construction in consideration such as: thermal expansion and the contraction; construction of rocking and movement; water shunting line; e the thermal efficiency for cost-effective of heating, cooling and illumination in the building (figure10 - C).



(figure 10 - C)

--> **The structural aspects that deal with the resistance to the fire** are based on the fact of that the high resultant temperatures of a fire reduce the resistance mechanics and the rigidity of the structural elements of the construction, and, additionally, promote thermal expanses distinguishing, being able to take the structure to the collapse.

But the security in fire case must point, mainly, with respect to the evacuation of the people and the conditions to prevent the propagation of fumes and gases, that are the root causes of the losses of lives human beings. The structural imperfections have very lesser importance in this aspect, and it only has excellent character when they can cause problems for the evacuation of the people.

In the buildings that have the base in the use in the metallic construction, of less sensible steel to the high temperatures will have to appeal the adjusted mechanisms, for example, use of protective films in the structural elements, for the improvement of its capacity of thermal isolation.

The objective is to increase the time of resistance to the fire is appealed, many times, to the application of thermal isolating materials for on the surface of the structural components. Some used materials as isolating thermal are, for example, intumesce wool of rock, coverings, cement derivatives, mineral plates, staple fibres, etc.. As an example, assuming a time of resistance to the fire of 3 hours for a building of great transport in common structural steel, a layer of about 50 mm of thermal isolation in the surface of the structural elements would be necessary so that the temperature we ourselves does not surpass the 550 °C at that time. On the other hand, the use of isolating materials implies in some effect undesirable. The use of the layer of thermal isolation can burden in about 10% to 30% the total cost of the used metallic structure, reducing the competitiveness of the metallic construction.

But it is a way to make face, to the measure that the risk to the life human being is considered bigger, due to occupation, height of the building, etc., the requirement becomes more rigorous and bigger it will be the required time of resistance. However it has a series of thermal protection of the structural steel elements (passive protection) as derivative cement projected, "intumesce" inks, ceramic blankets or woollen of basaltic rock, cart plaster and others, that are more economic with good thermal isolation to the high temperatures, keeping the integrity of the structure during the evolution of the fire. These materials are applied by spurt application and, after its drying, monolithic works with the structure, following its movements, without the occurrence of fictions or unfastening. Its durability will have to be same of the structure, excusing the maintenance, and not promoting any type of corrosive attack to the steel. They are not hygroscopic, becoming unnecessary the deep use of inks of or other systems of protection against the corrosion in internal structures. External structures costume to receive protection from a first anticorrosion layer and a bridge of tack (acrylic resin of base water) with the derivable cement, so that it does not have the development of the corrosion under the passive layer.

The derivable cement is product with high content of binders that, when mixed with water, they generate a fluid mass that can be pumped. Products of low, average or high density are presented as, and are constituted basically of plaster (approximately 80% of the dry weight), Portland cement (in materials of average and high density), acrylic resins and inert loads, such as expanded polystyrene, cellulose and conservancies. This allows to have reaction absorbs the energy of the fire, that would be lead to the steel. This process allows the steel to keep a temperature relatively low for 20 the 30 minutes during the first critical hour of the fire (figure 10 - D).