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Notes from the Editor’s Desk

This month’s issue features a plethora of suggestions from leaders in the construction business on what engineers can do to reduce fabrication costs. And though it sounds trite, probably the most important factor in project success is good communication between the entire project team—starting even before the preconstruction meeting and continuing during the fabrication and erection phases. In fact, today many successful engineers are consulting with fabricators about details and connections well before the job goes out to bid.

Communication is also critical when it comes to design drawings. Perhaps the biggest bugaboo with fabricators and detailers is when designers provide incomplete drawings. Loads and reactions should be included on drawings. You’ve already done the calculations; don’t make the fabricator or detailer guess at what you want.

Of course, there are other important steps a good designer can take to create an economical project. One key is to remember that least weight does not automatically equal least cost. Material only accounts for a third or less of the cost of a steel frame while labor accounts for 60% or more. The question therefore becomes: What can a designer do to reduce labor costs on a steel-framed building? And our articles on economy list more than 100 suggestions, ranging from eliminating stiffeners wherever possible to duplicating member sizes and connections rather than producing the absolutely lowest weight frame.

Welds are another big area of concern for fabricators. If applicable, specify fillet welds rather than groove welds, use single-pass welds, favor the horizontal and flat welding positions and don’t specify more weld than is necessary.

While most of the suggestions were contained in our last report on this subject (February 1992), there is also a lot of new advice.

One area mentioned by many fabricators concerns coatings. The advice for today is not to specify coatings for steel concealed and protected within a building envelope unless it’s architecturally exposed. Likewise, designers should remember that a shop coat (primer) is not a permanent coat and is generally not required unless the steel is going to be painted at a later date.

One problem area that pops up from time-to-time is when an engineer specifies non-standard material requirements that deviate from ASTM standards. Asking a mill to roll a non-standard material is the equivalent of going into your nearest Ford dealer and telling them you love the new Taurus but you want one two inches longer. Deviating from standard ASTM specifications will drive up the price of a job and drive a fabricator up a wall.

If you have questions, talk to a local fabricator. If you don’t know any fabricators, sign up now for next year’s North American Steel Construction Conference. About one-third of the attendees are fabricators and most of them are only too happy to exchange ideas and open lines of communication with design engineers.

Construction is a team effort and good communication is the key to success.