EUROPEAN PROJECT APPROACHES

SALLY LOVE

This is the first article in a series taken from the TAPPI Engineering Management Comittee's ROUNDTABLE discussion held during the 1997 TAPPI Engineering and Papermaking Conference in Nashville, TN.

Is there really a difference between European Approaches and American Approaches? And if there is, what are the differences?

Larry Crawford: The difference between European Project approaches and American project approaches is not in the engineering concept or superior engineering. It is in the cultures of the specialty contractors. For example, in France there are approximately six or seven piping contractors and they perform all of the piping contracts in the whole country, no matter the industry. These contractors have tremendous databases; and if you give them enough engineering they can tell you exactly what price they will finish your job for and exactly when they will finish it. That is the big difference in Europe.

Larry Crawford: The European approach is also educational based. At age 14 a young person knows what his or her career is going to be. Their education from that point on supports that career and nothing else. Therefore, the contractors have this core group of people and he owns the material. When you contract with him, he can move material on your job site in two days. He owns the warehouse of the construction material and has enough to keep him going while the engineering is finished. This provides tremendous schedule and efficiency benefits.

Larry Crawford, International Paper Co.

Gerard Closset: The difference is their extensive use of EPC packages. They use vendors for the major process islands and they get a package. They get costs for both the generic and the proprietary equipment and they're able to get very good packages based on that. Their procurement approaches are also quite different. Often, they are able to do quite a bit of procurement of the major process areas before the clock starts actually on the project. I saw this approach being used, and being refined, recently in Southeast Asia.

Larry Crawford: The Europeans tend to do a little too much total turnkey. Plus, their definition of total turnkey is not only *building it* but that means perhaps they can *finance it, start it up, train the people and then walk away*.

Larry Crawford: I certainly hope that as an industry we can foster this type of philosophy in modular designs, tank fabrications, etc. If you have a small, local pipe tank fabricator near your mill, if you start developing this kind of concept, over time I'm convinced you'll save money.

Gerard Closset, Champion International

Gerard Closset: The cost driver is becoming something that we have to take into account when we do projects. This EPC approach allows the owner and the consultant to develop the package at a very high technical level. And the package is much more complete. That allows the owner to negotiate a very good price for the package.

Larry Crawford: A tremendous benefit too is schedule. These specialty contractors have the project laid out in great detail.

Ben Thorp: I had the fortune to work for a European engineering company. They have a different way of working and it's that different way of working that we need to

Ben Thorp, Chesapeake

understand. There are some dangers there as well. Some of the vendors have come to this country and have tried to duplicate what they were doing in Europe. However, they didn't fully understand the infrastructure issues and they got themselves in trouble because they didn't get the same kind of service from the American specialty groups as they did in Europe.

Ben Thorp: There are a couple of heads-up. First, understand the importance of these infrastructure issues and make sure that what they assume is actually available. Second, don't go on a leap of faith about this turnkey business. You still have to define exactly and precisely what it is you want. European companies tend to do this much better than the US companies do. Document that what you want exists before you start the turnkey discussion.

Howard Johnson: Our exposure to European design is limited to a recovery boiler that we did turnkey. The up-front work is the most important aspect of any turnkey, and it certainly was for us. You must work closely with the vendors that you're considering and especially the vendors that you select so that you know exactly, down to the limit switch, what you're going to get.

Howard Johnson: Our recovery boiler project was completely financed by the vendor. We only paid when it met all of the warranties and guarantees. It was a very good experience for us, made possible by the up front work done by the group at the mill. The group involved maintenance, engineering, production, and our financial people. From the very beginning they identified what we were supposed to get at the end.

From the viewpoint of capital effectiveness, do you think that the European approach offers a distinct advantage as far as the total installed cost? Are they more competitive in Europe by doing this, and do they have the infrastructure?

Larry Crawford: Yes, the European approach is more competitive as long as the project is an island. It won't work at all if you're just in all parts of the mill with some portion of the project. If you don't have a specific island where you can clearly define the boundaries, you're asking for trouble. Also, it is more competitive if your EPC engineering contractor is on a fixed fee contract where he can make a bonus or penalty based on your total cost, schedule, capacity and product quality. That way the things he does that save him money save you money too.

Howard Johnson, Bowater

Howard Johnson: We did a conventional engineering study on our recovery boiler and found that we did save a considerable amount of money by doing the project turnkey. We came out much better than we would have with a conventional approach, because the vendors already had modular designs and it took very little engineering for them to adapt it to our situation.

Is there any movement toward doing business in Russia?

Ben Thorp: Approximately 75% of the standing softwood in the world is in Russia. So it's a country we can't ignore. Ultimately, that softwood has to be made available to do the kinds of things our society wants to do. Right now, if any one of us thinks about going into Russia, there is a risk-reward relationship that we have to balance and right now it's a bit risky. Longer term that problem will be solved.

Gerard Closset: Russia has tremendous potential but we have to look at where can we make money. It is very difficult to do business in Russia and very risky so I think it's going to depend on whether the risk-reward balance is in our favor.

Larry Crawford: The infrastructure there to support a mill is almost nonexistent. That's a big risk. The question is how long does a company want to invest money and wait for the economy to catch up. Someday, with 75% of softwood and 350 million people, no doubt.

Sally Love, president of Paragon Consulting Group was moderator of this Engineering Management Roundtable.