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Trip Report:

Technical Assistance in Fenestration Technology to Bosnia and Herzegovina

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Summary of the Trip Report

Trip to Bosnia was planned to occur on Thursday, after the IEA meeting, with a short stop over the weekend in Yugoslavia on my own time to visit friends and relatives. However, early Friday on a train from Vienna to Novi Sad, I was robbed and my briefcase with laptop computer, some important documents, passport and some miscellaneous things were stolen while I was sleeping in a sleeping car compartment. Somebody had broken into my compartment and most likely drugged me, since I had itchy and watery eyes for the rest of that day. Fortunately, my wallet was still in my pocket and two other traveling bags were with me, indicating that I may have interrupted the robbery by waking up and so preventing total loss. Unfortunately, my passport was stolen, and I had to go through a painful procedure of being sent back from the Hungarian border to the capital Budapest to get temporary travel documents from the Consulate and Hungarian Police. In order to get a replacement passport I had to stay in Belgrade, Yugoslavia until Tuesday, May 23 until I had a new re-issued passport in my wallet.

I left Belgrade early morning Wednesday and had reached my first destination in Bosnia, city of Bijeljina. Mr. Milorad Skodric, who was one of the planned participants for the Amherst “Train-the-Trainers” workshop had greeted me and hosted me for the following 3 days. We had a busy schedule of THERM and WINDOW training, visits to local manufacturers and some interesting opportunities for North American window technology, and finally a visit to University of Sarajevo in Sarajevo.

Due to a shortage of time, visits to factories occurred during the morning of the first day. First was a visit to Panaflex factory in Bijeljina itself. The factory is a manufacturer of high quality flexible pipes and fittings, that can endure high pressures and aggressive substances. The war in Bosnia had almost halted production, and the company is looking to survive right now. They have their own unique technological process for the production of pipes and fittings, and they even manufacture certain special purpose machinery needed for the process. However, they recognize that they inadvertently lost most of their market and that it will be difficult to get back to old production levels. For that reason, they are interested in converting parts of their capacities to building components related production, and especially windows. They are interested in a variety of arrangements, and are looking forward to our help in converting some of their capacity to a production of North American style of windows. Pictures with some of the production space including the space that could be converted to window production are attached at the end of the report.

Second visit during the morning was to another factory in the vicinity, “Pirometal” in Brcko district. Brcko is a city that is divided among all ethnic groups and is governed as a district under direct supervision of UN. It is situated only 40 km (25 miles) from Bijeljina. This factory produced a variety of building related products before the war, and as with other enterprises, lost most of their market due to the war. Two years ago they formed a joint venture with a Canadian investor named “Falcon Trade” and established a modern factory of North American style PVC windows (Canadian “Plastmo” profiles) and IGU units. The factory is located in a modern factory building, and it utilizes modern top of the line machinery for PVC production (mostly “Elumatec”) and fairly modern small line for IGU production. The windows manufactured are typical North American vertical sliders (double and single hungs), and casement windows that open to outside. IGU units are high performance units utilizing “Guardian” glass and “TrueSeal” “Swiggle-Strip” insulating (warm edge) spacers. The factory

never really “made it”, and was struggling from the very beginning. My and Mr. Skodric’s assessment is that they fell prey to a typical line of thinking in a post war Bosnia (and probably any other transitional economy country), that windows are “hot” items, and that they will basically sell themselves without any effort. As a result, the factory is at stand still right now, and owners are looking to find interested party to either purchase it or lease it from them. In a mean time they tried to jump start production with German style reinforced profiles for “tilt’n turn” windows, but again due to lack of marketing, and it appears any other effort, the production didn’t take off. Mr. Skodric looked into their waste containers and saw too many pieces longer than 3 ft., and whole windows crashed and disposed of, indicating very inefficient production.

It is our assessment that with the introduction of a quality U.S. PVC product (i.e., Mikron Industries), proper marketing effort and efficient organization of the production, including the addition of other missing lines of fenestration products, like Doors, etc. that factory has a very good chance of achieving profitability and in promoting North American technology in that region. The big advantage of this company is that everything is ready to go in a very short period of time. Existing stock of profiles can be marketed and sold as a low price item until it is emptied. Future production should be based on a new higher quality supplier (i.e., Mikron). Pictures of the factory floor, existing inventory and machinery is attached at the end of the report.

THERM and WINDOW training was crammed into the afternoon of the first day and most of the second day. Due to a loss of a laptop computer, the training was done using desktop computer at the office of “CMC” company where Mr. Skodric is a Director. The training was hampered by the need to share a single computer, but nevertheless, due to extended hours on the first day and the quick learning by Mr. Skodric, the fundamental features of both programs were taught and numerous examples were covered. It is hoped that there will be another opportunity to offer this training in a more appropriate setting with additional course participants. All training materials were left for Mr. Skodric’s future use.

The final third day Mr. Skodric and myself drove to Sarajevo for a meeting with University of Sarajevo professor, Dr. Emin Kulic. After longer than expected drive of almost 5 hours we arrived and met with prof. Kulic and prof. Alija Lekic, both in Thermal Sciences department of the School of Mechanical Engineering. Dr. Kulic is an organizer of a first Energy Conference in Bosnia and Herzegovina, which will take place June 15 and 16, 2000. We discussed the organization of the conference and the paper that I have submitted for that conference. They were both delighted that there was an interest from United States, and expressed real interest for further collaboration and technical assistance. They were disappointed to learn that I most likely will not be able to attend the conference, but I had offered that Mr. Skodric presents my paper, which was accepted by them. We discussed potential future areas of cooperation, like standards development, building of testing facilities (during the war most of laboratories were destroyed, and especially documentation and books were either destroyed or had disappeared). I asked them to keep us informed of their future activities, and to try to involve US sponsor for the next Energy conference. During our trip to Sarajevo, which involved some very picturesque regions, I have shot numerous pictures of destroyed houses and property, including downtown Sarajevo, which are attached at the end of a report. We ended a day with a visit to old town “Bas Carsija”, and dined famous middle-eastern type of grill (kebab

and sudjuk). We returned to Bijeljina late in the evening and left Bosnia early Saturday morning, after which I left for US early Sunday morning.

Images from "Pirometal" joint venture factory









Images from “Panaflex” factory



Limited selection of their current products



Production hall that is planned for conversion into windows factory



Images from the trip from Bijeljina to Sarajevo



No, this is not a matchbox, but remnants of a real house



Section of Sarajevo



Did somebody say HVAC system?



We need more "Mikron" signs like this



Windows crusaders are taking time off in Bas Carsija



Sarajevo's old town



Double hung windows on a 19th century house – we can market them as traditional windows!



Some more destruction along the road – windows anybody?



White UN car is in front of us



Check point between two entities –
we were not stopped, just needed to
negotiate barricades

