DISMANTLING, MOVING AND REINSTALLING DRY KILNS

Jim Perkins
Georgia Pacific Corporation
Philomath, OR

I would like to begin with a brief personal history. My lumber industry career began in 1961, when I was a nineteen year old, and went to work for Bohemia Lumber Company at Culp Creek, Oregon. Little did I know that I would spend the next twenty-five years of my life at that plant as the dry kiln operator, planer supervisor, and millwright. It was during that time that I got my first experience in teardown and reconstruction. The first renovation was with cedar and the second with block concrete.

I was transferred to Bohemia Saginaw Division in 1986, and spent two and a half years there completely renovating five double-track and two single-track kilns. Those kilns were 102' Moore Kilns.

In 1989, I was transferred to Bohemia Vaughn Division. The purpose of this move was to supervise the construction and renovation of the old planer and dry kilns which presently exist at that site. The kilns, ten singles and one double-track Moore, had to be replumbed with new condensate return systems, new doors and roofs, and extensive work on the interiors. Once they were up and running, I spent my remaining four years with Bohemia at the plant as the dry kiln and planer supervisor.

I joined Georgia-Pacific at Philomath on August 1, 1994. There I became responsible for overseeing the transfer of their kilns from Forest Hills, California, to Philomath, Oregon, where they were to be reconstructed. The dismantling had already begun when I came on board. The move consisted of four Wellons double-track 68' computer controlled low-pressure kilns; two were 1986 models and two were manufactured in 1989. The kilns are in relatively good condition.

As you may have concluded by now, each move has afforded me a little more insight on how to eliminate errors and become more efficient in the moving, maintenance and operation of dry kilns.

I have, therefore, attempted to put together a checklist that should prove useful to those of you who might be faced with a similar project in the future.

In the beginning, take a little extra time and map out what needs to be accomplished from start to finish. This will prove to be helpful to your company and to any contractor whom you retain. You also need to look very closely at the type of product you will be drying, as kilns are often designed specifically for certain products and climates. Future lumber drying can be affected to a great degree by these two factors.
It is a good idea to obtain at least three bids before deciding on a contractor. Make sure you have their specific responsibilities for the project and a time table or deadline written into the contract.

Most importantly, have the contractor who is responsible for the tear down also do the rebuilding. This will eliminate many of the problems of reassembly. Make drawings and blueprints of each kiln. Before dismantling begins, you will need to mark identification numbers on every part of each kiln and record it. This will enable you to properly reassemble them. I would like to emphasize this point! MARK EVERYTHING, no matter how large or small. This procedure may seem to be time consuming, but will speed up your reconstruction by eliminating problems of matching parts to the proper kilns.

Once the parts have been marked and charted, the crating can begin. I would suggest that you try to keep the parts to each individual kiln boxed together, as much as possible. This kind of move is a large undertaking and will require several trucks. In our case, it took a total of thirteen trucks to transport the four 68' kilns. This, of course, included the four control rooms, wall panels, fan decks, kiln carts, fans and motors, frame structures, traps, kiln rails and electrical equipment.

It is extremely important that the contractor dismantling the wall panels and doors takes every precaution to make sure they are well covered and protected from the elements. It is essential that they be kept dry, as moisture will cause aluminum doors to water stain and insulation can be ruined.

The steam mains coming from the boiler to your kilns may need new pipe. Unless the state inspector can read the stamp on the used pipe, they will have to be replaced. Be sure to check before you pay to have the old pipe transported.

In preparation for the reconstruction you will need to provide ample space to unload and store all of the parts for the contractor’s convenience.

The first step in preparation of reinstalling the kilns should be laying a proper foundation. Putting a little extra time and effort into this project will eliminate problems with installation, fans running properly, and having everything fit into place correctly.

The contractor should be on the plant site putting up the frame structure before the walls, doors, and roof panels arrive. The control room or rooms should be shipped last.

Try to be on hand and observe each step as they rebuild your kilns. This will give you more insight into their internal workings and will help you to trouble shoot any future maintenance problems which may arise.

After the construction is complete, the steam traps should be pulled apart and cleaned if they are the inverted-bucket type. The steam control valves should be checked for wear-vent positions. This is essential if you are having computer control programming installed. It is best to work with the original manufacturers of the kilns if this is your intent.
It is a good idea for your dry kiln supervisor to be present to observe all of the reconstruction. He can be a valuable source in double checking for any errors which might occur. It has been my experience that preventing errors is a more desirable option than future maintenance problems which may result.

In conclusion, to make the determination as to whether or not moving used kilns is cost effective you must take several things into consideration. There will be site preparation costs, contractors for the tear down and reconstruction, transportation (distance is a consideration), replacement part (due to loss, age, etc.), and whether modernization will be possible. Keep in mind there will always be those unexpected problems, so allow extra time and money to cover these. Most of all, make it a learning experience.