A SERVICE OF THE JUNEAU ECONOMIC DEVELOPMENT COUNCIL, WOOD PRODUCTS DEVELOPMENT SERVICE

ALASKA WOOD PRODUCTS BULLETIN

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WELCOME TO THE FIRST ISSUE OF AWPB

Welcome to the first issue of the *Alaska Wood Products Bulletin* (AWPB). The purpose of this newsletter is to foster communication among people engaged in wood products manufacturing in Alaska. Such newsletters are elements of what I like to refer to as "soft infrastructure". Other examples of soft infrastructure are industry associations, cooperatives, training meetings/workshops, Internet sites/web pages, industry directories, continuing education and R&D. If you look at regions of the country, or even individual States, where the forest products industry is healthy and growing, you will find well-developed "soft infrastructure".

I hope to use this newsletter as a platform upon which to convey news, views, announcements, technical information and marketing insights. It can also serve as a clearinghouse to assist buyers and sellers of equipment, machinery, logs, lumber, professional services, etc. Ultimately, this is YOUR newsletter and it must meet YOUR needs. If it fails to do that, there is little justification for its existence.

This is not the first or only "forestry" oriented newsletter for Alaska. A forest industry marketing bulleting was published for a number of years by Alaska Cooperative Extension (ACE) in Fairbanks, but it has been about 10 years since it was last published. Today, Bob Wheeler with ACE periodically publishes *Under the Canopy*, a newsletter primarily oriented towards forestry, forest management and forest health, but there is usually an article or two that would be of interest to manufacturers. Another important newsletter, *Alaska Timber Times* (ATT), is published by the Alaska Forest Association. While ATT generally reports on Association activities, it also includes continuous monitoring of State and National policy issues relating to timber supply and other regulations and decisions affecting Alaskan loggers, sawmillers and manufacturers. If you are not receiving these newsletters and would like to, contact Dr. Bob Wheeler in Fairbanks at 474-6356 and the Alaska Forest Association in Ketchikan at 225-6114.

Finally, given rather limited resources, I would only anticipate publishing the *Alaska Wood Products Newsletter* on a quarterly basis initially. However, if there is enough demand and **input** from the readership, I could see it becoming a by-monthly publication quite easily. You may be wondering what I mean by "input from the readership". What I'm referring to are classified ads, technical questions, company profiles, articles, etc. I invite your **input**, and will work with you to develop them into publishable form. I have done enough newsletters like this to know that it is a BIG job for one person to be the writer, editor, publisher, printer and distributor. However, with input from you, that job can be made much more manageable. I am looking forward to it.

ALASKA WOOD PRODUCTS MANUFACTURERS DIRECTORY 2000

In 1998, the Alaska Department of Commerce and Economic Development undertook a survey of the forest products industry in Alaska. Unfortunately, a directory containing that information was never published. Such directories are another example of "soft infrastructure" that I feel is critically important to the development of our industry. Therefore, an *Alaska Wood Products Manufacturers Directory 2000* is very high on my list of priorities this year. Much of the information is already available and most of that has already been entered into a database. However, I want all Alaskan wood products manufacturers to have one final opportunity to be included and publish the most current information available. (Continued on page 2)

ALASKA DIRECTORY (continued)

In addition to the usual name, address, phone, fax, etc., I also want to include **E-mail addresses** for those businesses/individuals that have them. I will also publish the **mill type(s)** (if applicable), **species** processed, **products** manufactured and **auxiliary equipment**. If your name or company name appears on the list on the back of the questionnaire included in this newsletter, then the information I have for you is **incomplete**. If you wish to have more comprehensive information included in the directory, you can fill out the questionnaire and send it back to me. If your name does not appear on the list, you can assume I have a reasonable picture of your operation, based on my visiting your facility or your response to previous questionnaires. However, feel free to submit updated information if you desire. I would like to have any/all updated questionnaires by **May 1st** and would expect the Directory to be published and distributed in June/July. All companies listed in the Directory will receive a complimentary copy.

DRY KILN GETS TRY-OUT IN SITKA

As you may have already heard, the City of Sitka, with grant funding from USDAFS Office of State and Private Forestry and technical assistance from yours truly, was able to arrange for the purchase of a small demonstration dry kiln. The kiln, built in a 40' shipping container, arrived in Sitka in mid-November. After repairing damage and vandalism incurred in shipping, installation was fairly straightforward, requiring the installation of a fuel oil tank, a bit of plumbing and electrical connections (200 amp, single phase). The kiln is being housed at UAS Sitka and is available for training and research.

The kiln got its inaugural run during a 4-day Lumber Drying/Kiln Operator's Workshop in early December. Attendance was modest at 12 people, but the reviews were outstanding. During the course of the Workshop, attendees (from Ketchikan to Fairbanks and points in between) started with the basics (i.e., why we dry lumber, how lumber dries, moisture content calculations and lumber shrinkage) and progressed through proper stacking and stickering techniques, kiln sample preparation, understanding Equilibrium Moisture Content and creating custom drying schedules. Not only were such things taught in the classroom, but, because of the kiln and facilities available at UAS Sitka, we were able to conduct hands-on exercises as well.

We dried approximately 3500 board feet of mixed Sitka spruce, Western hemlock and Yellow Cedar in thicknesses from ½" to 1-5/16", and the results, in spite of some start-up "glitches" were acceptable. Initial moisture contents ranged from 24% to 166%. Final moisture contents of the kiln samples ranged from about 3½% to 6%, while moisture meter readings ranged from about 4½% to 11% in individual boards. One of the "glitches" we encountered was our wet bulb water reservoir going dry overnight during the last day (the equalizing stage) which caused the vents to open when they shouldn't have. As a result, the driest lumber dried below the point it was supposed to. At that point we cut some stress tests (prong tests) and found that, although there was *some* stress, it was within acceptable limits. Furthermore, knowing that that the lumber would sit in storage for several moths before being used, we decided to forego any conditioning (stress relief) treatment in the kiln and instead relied on the lumber's affinity for moisture to achieve what little stress relief was required. (*That* worked.)

All in all, it was an excellent workshop. If you missed it, you missed one of the best wood products workshops ever held in Alaska. **If you are interested in attending such a workshop this year, please let me know ASAP.**

BABBITT BEARINGS

Babbitt bearings may have gone out of fashion along with flat belts and high button shoes, but I still get an occasional call on where to get babbitt metal and how to pour it. Most of these calls are from people who just bought a massive old planer at a bargain price and want to surface some lumber for the retail trade. Babbitt works pretty well for planer bearings, giving the cutterhead plenty of support and absorbing some vibration. You'll also find babbitt in modern high-production mills. Babbitt is used in slow-speed journal bearings for the bull wheels of debarkers, which are subjected to shock loads that would destroy most ball bearings. Some of this discussion could also apply to pouring babbitt behind chipper knives.

One of the biggest problems with babbitt bearings is that they tend to run fairly hot, especially at high speeds and when lubricated with grease instead of oil. I don't think babbitt bearings should be used on the arbor of a headsaw because the heat distorts the saw. Yes, I know that the saw can be hammered to compensate for the added heat in the eye, but I bet it takes 2 or 3 trips to the saw doctor to get it right. There is enough aggravation in life, so why put up with that nonsense -- put modern bearings on the shaft or at least replace the bearing nearest to the headsaw. Besides, babbitt bearings on the arbor tend to develop endplay, which is very undesirable if you want to saw accurate lumber.

Contrary to common opinion, you don't have to be some sort of wizard to pour a usable babbitt bearing. There is a little art to pouring and scraping a bearing, but if you screw up you just re-melt your mistake and try again. So let's give it a try.

What is babbitt metal? In 1839, Isaac Babbitt patented a formula for a bearing metal made out of 89.3% tin, 7.1% antimony and 3.6% copper. This alloy has great anti-friction qualities and is still sold as Genuine Babbitt today. Tin is expensive, so other cheaper grades that contain lead or zinc were formulated that were good enough for situations requiring less strength. It really throws someone trying to buy babbitt for the first time to find out that each manufacturer may have several to more than a dozen grades to pick from. For the planer and similar applications, get Genuine Babbitt, high speed babbitt (Willard Alloy #3) or Hi-nickel babbitt. For debarker bearings, "Universal", "Perfection", "SAE 13" and "Willard #7" are different manufacturers' names for about the same grade of babbitt metal.

Where do I get babbitt? You can probably get most of the babbitt you need right in the old bearing shell (bearing shells are also known as boxes, top and bottom caps, etc.). Melt it out with an oxy-acetylene torch and pour it into a cast iron lead-melting pot or an old 2-quart cast iron saucepan. Scrape, chisel or melt-out the old metal from the retaining groves and holes too. Now you're going to have to add a little metal to make sure you have enough to pour the new bearings. It's a lot better to have too much than too little to finish the job.

Some sawmill supply and chipper companies sell low-speed babbitt and you might even find some at a good old-fashioned hardware store if you're lucky. As a somewhat crude alternative, you might be able to add type-metal (linotype or monotype) or even wheel weights if you don't need to add very much. [A list of possible commercial suppliers is included at the end of this article.]

Getting ready. Make sure the bearing shells are clean and totally free of oil or the babbitt will wrinkle or be loose in the shell. Examine the shaft -- it should be round, smooth and polished. If it isn't, you may need to take it to a machine shop. Light rust can be removed by cutting strips of extra fine silicon carbide paper and polishing the shaft's surface as if you were shining shoes with a cloth. Be sure to clean off <u>all</u> the abrasive dust before pouring the bearing.

One-piece bearings will, of course, be poured in one step and, if at all possible, this should be done with the bearing in the vertical position (easily accomplished for a drill press bearing or the side heads of a planer/matcher; not quite so easy for a sawmill mandrel). Be sure to coat the shaft with something to create some necessary clearance and prevent the shaft from sticking to the babbitt. The preferred method is to "smoke" the shaft with smoke from the low flame of a kerosene lamp or candle.

Place the shaft in the exact middle of the bearing shells and support it anyway you can. Plug or dam any hole that will allow the molten babbitt to escape. Use anything that will stop the flow of metal and not catch on fire from the heat of the molten metal or the preheating of the bearing shell. Commercial fireproof clay (sold as Dambabbitt or Babbittrite), wood, sheet metal and pasteboard (if you are careful) can be used to plug the gaps too.

Two-piece (split) bearings can be poured together and cut apart, or they can be poured separately. If the bearing has little or no in-place adjustment, pour it as one piece. If it has the ability to be adjusted, or you aren't afraid to scrape, then pour each one separately. To set up a split bearing to be poured together follow the instructions in the Small Sawmill Operator's Manual, Agriculture Handbook #27, 1952 [applicable passage enclosed]. Note that brass shim stock or sheet metal would be better choices than pasteboard for this technique.

To summarize preparation - - clean out the bearing shells (boxes), make sure the shaft is in good condition, level and/or plumb and arrange the parts in the exact relationship you want them in when running and support them any way you can. Shim, dam and plug all potential leaks.

How do I melt babbitt? Babbitt melts at around 460^{o}F although it ought to be poured at a constant temperature of about 800-870 degrees. I have a large electric lead pot designed for bullet casting that holds 20# of lead and has heat controls (its made and sold by Lyman). Plumber's furnaces and kitchen stoves can be pressed into service and in the "good-old days" the babbitt was melted over an open fire, but none of these options will let you just dial in 850^{o} on them. An old way of telling if the metal temperature was right was to push a dry pine stick into the molten metal. If the stick charred after 3 or 4 seconds, but did not catch on fire, the mix was ready to pour. As an alternative, you might consider using a bullet caster's thermometer to check the actual temperature.

Before we go any further, I'd like to take a look at safety precautions. Melt babbitt in a well-ventilated area as fumes from lead, antimony and arsenic are definitely poisonous. I intend to install a hood and a kitchen exhaust fan over my lead pot, but for now, I've set up a portable fan to blow the fumes away from me, or I'll work outside when the weather is nice. Wash your hands thoroughly before eating.

Moisture and molten lead are a dangerous combination -- the water flashes to steam instantly and has the effect of a small explosion, spattering hot metal in all directions. Wear a hat with a good sweatband, safety glasses, a long-sleeved shirt, leather boots, gloves and apron to protect yourself from spatters and spills.

Pouring. Heat the iron bearing shell with a torch until it's 200-300 degrees (water will quickly evaporate at this temperature but not sputter, and cardboard dams and collars won't char). If the shell is too cold, the babbitt will cool too fast to flow properly resulting in wrinkles and voids. If the shell or babbitt is too hot, blow-holes will result or the metal will cool too slowly allowing the heavier metals to settle out, changing the hardness of the bearing (or giving inconsistent hardness). Heat the shaft too, but keep it even or it could warp.

Just before pouring, stir the molten babbitt to mix up the metal then skim off the "dross" (dirt and/or oxidized metal) that's floating on the surface of the molten metal. Ideally, your ladle should be big enough to pour the bearing in one filling, but if you need two, be sure to work fast.

Inspecting. Remember that you can live with a few minor defects, especially at the ends and near the oil holes. You can also tolerate some small depressions near the shaft where air might have been trapped. Looseness, large voids, a gritty feeling on the bearing surface or a frosty appearance means you should repour.

Finishing begins by cutting off excess metal (two-piece bearing) with a chisel. Drill out the oil holes and cut an oil groove with a triangular file or chisel from the oil hole to about ¼" of the end of the bearing. One-piece bearings must be driven off the end of the shaft before the oil groove can be cut. On a low-speed bearing that's about all there is; shim two-piece bearings, lubricate it and use it, but check it frequently after you start up.

High-speed bearings usually need an additional step to make them run smoothly and reasonably cool - - that's scraping. You can use a machinist's scraper or make one by grinding the teeth off two sides of a large triangular or flat file. Use a thin coat of Prussian blue (machinist's lay-out dye) on the shaft, then reassemble the bearing and turn the shaft by hand. Take it apart and the high spots on the bearing will have dye on them. Scrape the high spots down, reassemble and repeat the procedure until at least half of the bearing shows blue. Now reassemble, shim if needed (two-piece bearings), run and check for heat. The new bearing will run hotter than usual until it breaks in, but if the heat during the break in period is excessive, you may have to scrape some more or re-shim.

To Babbitt a Split Bearing. *"To babbitt a split bearing, clean the shaft and box as for a solid bearing and fix the bottom half of the box in a position on the shaft. Put shims across the junction of the bottom and top halves of the box. These shims extend to the shaft the full length of the box, and each has two or three notches next to the shaft to permit filling the bottom half with melted babbitt. Bolt the top half of the box in position and enclose the ends. Heat the box and shaft and pour the metal through the oil hole. When the metal has set, unbolt the upper half of the box and separate the two halves by driving a chisel between them to break the babbitt in the shim notches. Scrape off uneven spots in the bearing, put in the oil grooves, and bevel the edges of the babbitt slightly where the top and bottom halves of the box meet. In fitting the box, bolt it in place, using shims to separate the halves enough to give a cool box."* (*Small Sawmill Operator's Manual*, Agriculture Handbook #27, 1952.

POSSIBLE SOURCES OF BABBITT METAL

Company Name	Address	City, State, Zip Code	Telephone	Fax
United American Metals	2246 W. Hubbard St	Chicago, IL 60612	800-449-0300	312-733-6710
Ney Products, Inc.	269 Freeman St., Dept. T.	Brooklyn, NY 11222	718-389-4900	718-349-2313
Belmont Metals, Inc.	320 Belmont Ave.	Brooklyn, NY 11207	718-342-4900	718-342-0175
Signet Metal Corp.	551 Stewart Ave.	Brooklyn, NY 11222	888-788-5976	718-388-7488
Kapp Alloy and Wire, Inc.	P.O. Box 1188	Oil City, PA 16301	800-327-6533	814-676-5565
Fry Technology USA	4100 6th Ave.	Altoona, PA 16602	800-289-3797	814-944-8094
Canfield	1 Crossman Road	Sayreville, NJ 08872	800-526-4577	732-316-2177
Grant Mfg. & Alloying, Inc.	60 Schoolhouse Road	Souderton, PA 18964	215-723-0330	215-723-7704
Willard Lead Products Co., Inc.	101-T New Bern St.	Charlotte, NC 28220	704-523-1230	704-527-8580
Willard Industries, Inc.	1245 Knowlton St.	Cincinnati, OH 45223	513-681-6655	513-681-7130

USDAFS WOOD UTILIZATION CENTER NOW FULLY STAFFED

A research center that opened last year to identify opportunities for a viable forest products industry in Alaska is now fully staffed. The Wood Utilization Center in Sitka, which is administered by the USDA Forest Service, Pacific Northwest Research Station, today operates with a professional staff of five.

In its first year of operation, the center attracted 150 people to a value-added forest products workshop that brought together developers and users of research products. "That was the first event the Alaska Wood Utilization Center sponsored" said then-acting director Ted Laufenberg, "and it set the stage for developing a strong research, development and applications program for the center. We're committed to working with community partners to identify and evaluate the opportunities for a viable forest products industry in Alaska. Now that we are fully staffed, we can do that more effectively."

The team consists of Ken Kilborn, team leader; Linda Christian, forester; Pete Tsournos, research economist; Dave Nicholls, forest products technologist; and Bridget Brady, information specialist. Kilborn has more than 35 years experience working with the forest products industry. He has held various positions including forest products specialist with the Forest Service in four different Regions, and marketing and utilization specialist at Colorado State University. Until recently, he operated his own consulting firm providing product recovery studies and improvement project evaluations for the Alaska sawmill industry.

"We want to make sure people are thinking statewide and not just thinking of the Tongass when they think of wood products", Kilborn explained. We are working here at the center to provide services to various manufacturers and users of Alaska forest products. We also want to help sawmills as they work to improve processes to meet the market needs. We want to focus on research that has practical application that can assist the Alaska wood products industry."

The Wood Utilization Center plans to sponsor two workshops this year; a Special Forest Products workshop in Sitka on May 8th in conjunction with Alaska Cooperative Extension and the Sitka Chapter of the Society of American Foresters; and a Value-Added Forest Products workshop in Fairbanks in Fall 2000.

The center is part of the USDA Forest Service's Pacific Northwest Research Station. The Station, with headquarters in Portland, OR has a history of conducting research and helping answer resource questions that assist the needs of communities, entrepreneurs and land managers. The Station is one of nine research facilities in the USDA Forest Service. The facilities collectively conduct the most extensive and productive program of integrated forestry research in the world.

For more information, the folks at the Wood Utilization Center can be reached at (907) 747-4309.

BITS 'N' PIECES

At the Portland **Wood Technology Clinic and Show**, I came across a new venture that should be of interest to wood products manufacturers and consumers worldwide. It is called **Forest*web***. I have not yet had much opportunity to check it out thoroughly, but from what I have seen, it appears to be a searchable database of companies and products, although it goes beyond just a simple online database. You can also find news, prices, people, links, events, etc. As a registered user (free) you, your company and your products are included in the database. The only requirement is that you have an E-mail address (there are several places on the Internet that provide free E-mail service (such as MSN's hotmail.com or Yahoo.com), even if you don't have your own Internet account. You could access it through a friend's computer, a cyber cafe, a public library or school, etc.). I encourage you to check it out and consider becoming a registered user. The URL is http://www.forestweb.com.

For those in need of wood machining training, check out the BC Specialties Group ***Value-Added Skills Centre*** in Abbotsford, BC (just over the border from Washington State). The Centre officially opened on October 7, 1996, and "teaches high-end value-added wood products manufacturing skills and provides a unique opportunity for students to formalize their knowledge". There are 5 key training areas called modules. They are basic wood manufacturing, gluing technology, profiling technology, sawing technology and surfacing technology. Within each module are 2 to 6 one-week courses. The cost of a course is $840 and class size is restricted. I have a list of the individual courses that are offered, or you can contact the Centre at 1-31088 Peardonville Rd., Abbotsford, BC V2T 6K5, Phone (604) 556-3373, Fax: (604) 556-3385.

RATCHETING UP, INCREMENTALLY

Over the last couple years and in spite of the pulp mill closures in Southeast, difficulties with timber supply (almost everywhere) and generally poor market conditions (due primarily to downturns in Asian economies, especially Japan), independent Alaskan wood products manufacturers have managed to demonstrate surprising resilience. Now, I know this isn't true everywhere or for everyone; some companies are struggling and some have even gone bankrupt. But, progress has been and continues to be made.

Many of you have had lumber recovery studies or plant assessments done through the ASTF/INC Forest Products Manufacturing Project – often pin-pointing trouble spots in your manufacturing process or identifying opportunities for improved yield/utilization or new products. Having the ability to sell graded lumber has been incredibly important to several mills in the State (See **The Trading Post** for more information on lumber grading services). And marketing studies done by the McDowell Group have served as the basis for justifying expansion into manufacturing value-added products.

Where do you stand? Where are you going? The variety of wood products manufacturing equipment today is truly mind-boggling. From the most basic Alaskan chainsaw mill to the largest computer controlled, curve sawing quad bands and everything in between, today's sawmiller has choices that simply didn't exist 20, 10 or even 5 years ago. You can get a dry kiln in virtually any size, powered by virtually any energy source, while woodworking machinery and accessories make manufacturing nearly any solid wood product possible at virtually any production level.

If you always do what you've always done, you'll always get what you always got. I'm not saying that you *have* to get bigger (i.e., greater production) or become more vertically integrated. If you're content where you are and your employees and markets and raw material base are solid, congratulations! You might even be able to afford to be complacent. I know a few operations like that, but they are few and far between. Most wood products manufacturers, whether they actually are or not, *cannot* afford to be complacent. If they're not making incremental improvements in recovery/utilization, productivity, safety, quality and marketing AND differentiating themselves and their products from the rest of the pack, then they're not just standing still, they're going backwards.

Where to start? Start by being honest with yourself! How good are your products? The answer lies in how well your products meet the needs of your customers. Do you "saw it, then sell it" or are your products sold before the log even goes into the mill? In other words, are you making what *you* want to make and then trying to sell it, or are you making what customers want to buy at a price they're willing to pay? Is your lumberyard inviting to a potential customer? Does it relay the notion of quality? Or, is it a muddy/dusty quagmire full of teetering gray lumber piles and junk machines?

You must match products to available raw materials or raw materials to accessible markets. You can't make oak furniture out of spruce logs and you can't very well sell fence posts in an area where there are no farms. But once you reconcile your raw materials to your markets, the technology to make the conversion (though there may be many options) is fairly straightforward.

Let's consider a few examples. How could a small sawmill operation using a portable mill increase production (if that's what his market research tells him is feasible and assuming there are adequate raw materials)? He *could* graduate to a conventional carriage-type mill, but that's a pretty big step. How about a bigger saw, or a better saw or a faster saw or a second saw. (You know, there is a mill back East that runs 5 mini-bandmills, feeding a common edger, producing 65 mbf per week in hardwoods. That's over 3 million feet per year and the initial investment, operating costs and depreciation on saws of that kind are minimal.) How about adding a debarker or a debarking head so the sawblades stay sharper longer. How about adding an edger for about $5000. How about a small (or large) horizontal band resaw with a merry-go-round/return system. Can't get decent production on small diameter logs? How about a Precision scragg/gang mill. Speaking of small diameter material, how about a pole peeler and end tenoner to make pole fencing or log furniture? Drowning in wood waste, or burning it just to get rid of it? Why not burn it in a hot water furnace and use the heat in a dry kiln. Think you need a $50,000 moulder to make moulding? Would you believe $15,000? How about $7,500? How about $3,000 or even $1,500?!! Ever consider laser engraving or CNC routing? What resources in your area are being overlooked by other producers (diamond willow, red alder, black spruce, burls, drift wood, etc.)?

There are all kinds of possibilities and opportunities out there and some people are finding ways to exploit them. Remember, in the jungle, the tiger starves last.

THE TRADING POST

For Sale: • Brunner-Hildebrand Dry Kiln model HTR 100, approximate capacity 25 mbf, including B7400 kiln controller and Hurst Boiler, Model S45-0-75-15 oil-fired, including FeedMiser condensate return system. This equipment (kiln and boiler) is new, still in its original packaging materials, located in Sitka, AK. Asking $90,000

• Kockums Cancar resaw, 6 ft single band linebar complete with infeed linebar, outfeed linebar, tailbar, sawguide, setworks and various materials handling equipment, located in McCall, ID. Asking $25,000 (not including operator's control cab and PLC system, available separately from Jensen Electrical Controls, Council, ID (208) 253-4816).

• Motor Control Centers, located in Sitka, AK. (6) Allen-Bradley sections, asking $1500 per section. (8) General Electric 8000 Line 800 amp sections, asking $750 per section, and (4) GE 6000 Line 600 amp sections, asking $500 per section.

This equipment was repossessed by the City and Borough of Sitka and is being sold by the Juneau Economic Development Council. All equipment is being sold as-is, where-is with no warranty. It is the intention of JEDC to sell the equipment to the highest bidder(s) on or before April 30, 2000. JEDC and the City of Sitka reserve the right to refuse or negotiate all offers. Please direct any inquiries to Margaret O'Neal at JEDC, telephone (907) 463-3662.

For Sale: Mighty Mite portable sawmill, 40 HP 3 phase 220/480 volt electric, with single edger saw, capable of cutting up to 4" x 12" x 24' timbers, approximately 15 years old, good mechanical condition. Mounted on 40' flatbed trailer with outriggers, including an operator's "house". Includes spare edger and main sawblades. $12,500. Also, good variety of rough-cut green hemlock and spruce lumber in all sizes, shop and dimension, cabin cants, timbers and railroad ties. Wes Tyler, Icy Straits Lumber Co. Hoonah, AK 945-3626.

For Sale: Military trailer with sliding reach, set up to haul 8' – 25' logs or lumber, 12.00 x 16.5 tires, tandem axle, 3 bunks, like new, $3500 OBO. Kiln dried tongue and groove decking 2x6 or 2x8, KD paneling ¾", KD 8" log siding. Bandsaw sharpening service, all tooth pitches, bands up to 2" wide. Also, new Simonds and Lenox bandsaw blades. Gary McKellar, Central Peninsula Lumber Co, Ninilchik, AK 567-3466.

Wanted: Timbers for timberframing, hemlock, Sitka spruce and yellow cedar, 8" x 8" to 12" x 14", 8' to 24' lengths. Must be free of shake, rot and large knots. Also, **Timberframing Workshop** to take place in Spring 2000. Jake Thompson, Valhalla Construction, Girdwood, AK 783-9462.

Wanted: Sitka spruce music wood, prefer air dried, split rounds or quartersawn (vertical grain) lumber up to 8'. Mid to upper end quality. Chris Adamopoulos, Hollywood Music Shop, Hollywood, FL (954) 927-9017 ph/fax.

Forest Industry Directories: If you are taking a proactive approach to marketing, forest industry directories are invaluable tools. Independent Directories, Inc. of North Burnaby, BC publishes several directories of possible interest to Alaska manufacturers. These include the *Alberta Forestry Directory* (including Saskatchewan and Manitoba), the *British Columbia Forestry Directory*, the *Pacific Northwest Forestry Directory* (including AK, (I found 19 Alaskan mills listed) CA, WA, OR, ID, MT) and the *South East Forestry Directory* (including TX, LA, AR, MS, AL, TN, KY, WV, VA, NC, SC, GA, FL). Independent Directories can be reached at 800-419-1113 or 604-299-1112 and fax at 604-299-1162. To my knowledge these directories are free. Two other directories I highly recommend are the *Washington State Value-Added Wood Products Directory* (1993-94) available for $20 from CINTRAFOR at 206-543-8684 and the *Oregon Wood Products Marketing Directory 1995* available from the Douglas County OSU Extension Office at 541-672-4461. Lastly is *A Reference of American Sawmills* published by Southern Lumberman magazine. The 1999 issue included 19 Alaskan sawmills. Contact Southern Lumberman at 615-791-1961 (phone) or 615-790-6188 (fax).

Lumber Grading Services: Thanks to a special arrangement between the Alaska Science and Technology Foundation (ASTF) and the Western Wood Products Association (WWPA), Alaska has its very own resident lumber inspector, Mike McGuigan. If you join WWPA, Mike will visit your mill once a month to provide lumber grading training to you or your lumber grader(s), and will work with you to help you earn grade stamping privileges. If your production levels don't justify membership in WWPA, Mike is also available on a per diem basis to provide lumber grading instruction or to grade lumber for special needs or projects on an as-needs basis. Mike lives in Eagle River, but serves the entire state. He can be reached at 694-3544.

*To place an ad in **The Trading Post**, mail, e-mail or fax the information to me in Sitka. Please do not attempt to submit ads over the telephone. Only items of interest to the wood products community will be published. Please include your name, mailing address and telephone number. E-mail addresses are optional. Ads will be run for one issue of AWPB per submission.*

The Juneau Economic Development Council is not responsible for the accuracy of advertisements appearing in the Alaska Wood Products Bulletin. Such ads do not imply any endorsement of any products, item, service, individual or company.

HOW TO KEEP CUSTOMERS

Introduce New Ideas

Bring and Demonstrate Expertise

Anticipate Customer's Needs

Display Quality Image in Everything

Know the Customer's Business

Continue to Learn

Take Responsibility

Communicate Clearly

Be Accessible; Stay in Touch

Keep an Eye-Out for New Trends

Listen

Think Like a Customer

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