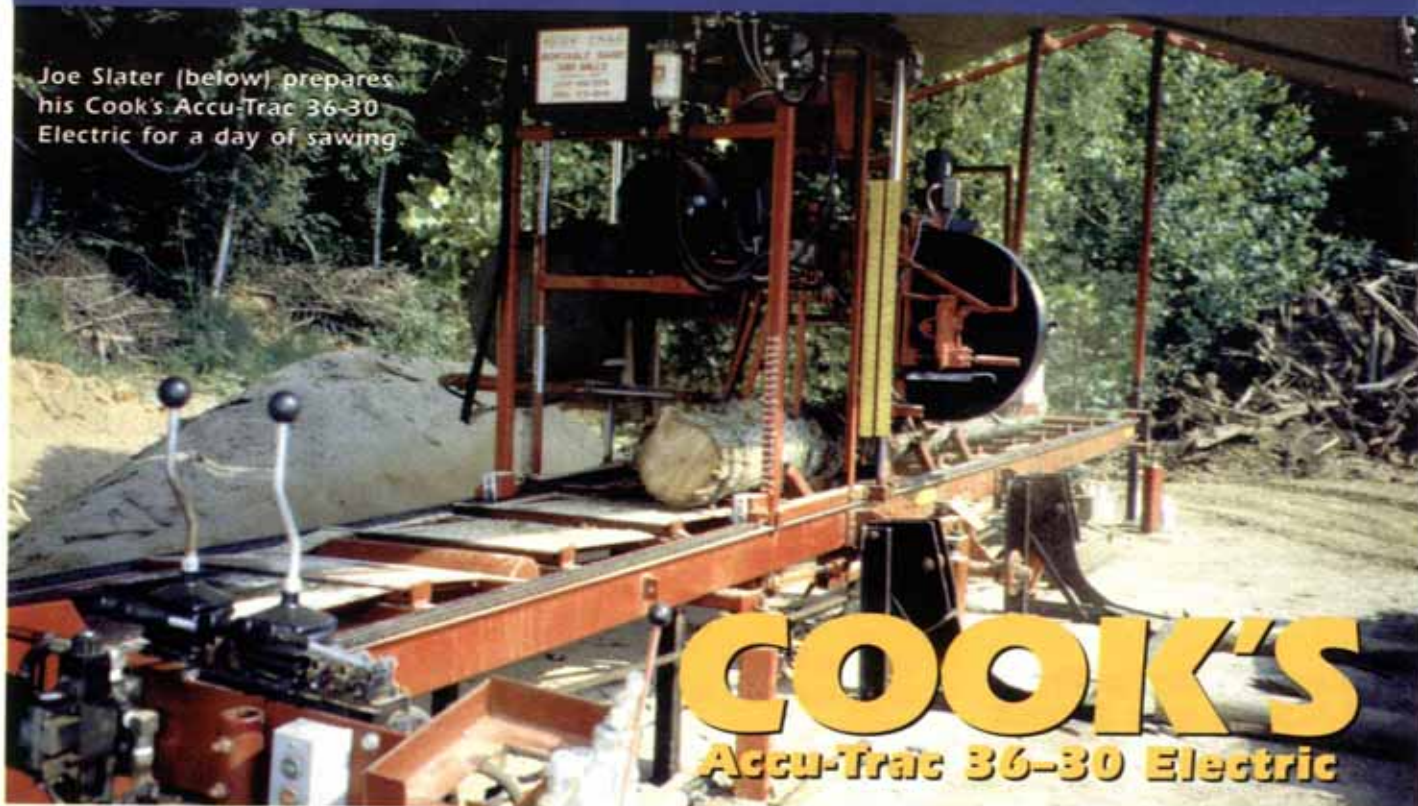


IS&WM's PORTABLE SAWMILL *Review*

Joe Slater (below) prepares his Cook's Accu-Trac 36-30 Electric for a day of sawing.



PHOTOS BY JOE DENIG

COOK'S

Accu-Trac 36-30 Electric



**A well-built,
easy-to-use,
narrow blade
bandmill
capable of
high production.**

By Joe Denig

Reviewing Cook's Saw and Machine Accu-Trac 36-30 Electric was an interesting assignment—from the standpoint of the mill and the operator.

Joe Slater and his father, Frank, operate a landfill business northwest of Winston-Salem, North Carolina. Joe is a graduate of North Carolina State University's furniture manufacturing and management program and is an accomplished machinery fabricator. Frank is semi-retired and an extremely accomplished cabinetmaker. Joe's father-in-law, Jim "Chief" Millirons, assists them, doing a good deal of the sawing single-handedly during normal operations.

How does a sawmill fit into a landfill operation? There are 13 landfills in Forsyth County, but only

the Slaters recycle. They receive brush, stumps, concrete, and logs at their facility. Their operating philosophy is to recycle as much as possible, generating usable products to extend the life of their landfill facility. Besides lumber products, they produce topsoil and crushed concrete products. This is the interesting facet about Joe's operation: He is utilizing others' waste.

Joe focuses much of his time on the landfill business. To emphasize this point, he commented on sawing, "It's not play but I make my living from the landfill." Thus he wanted a simple, reliable, bandmill that one person can operate. Often Chief fills this role as the lone operator. Their product line is also simple, concentrating on packaging timber and

framing lumber for the house that Joe plans to build.

Joe purchased his mill in March 1999. Prior to purchasing, Joe looked at many mills before he decided to buy from Cook's. He chose a bandmill versus a circle saw because he felt the bandmill was safer. And he bought from Cook's because of the machine's construction, the company's willingness to accommodate some minor design changes, and their knowledge of the mill and sawing techniques.

The Accu-Trac 36-30 Electric is a well-built, narrow blade bandmill aimed at the top end of the market. It features hydraulic log loading, turning, and dogging. Joe said that one feature he especially liked about the mill is that he can stand at

one location and observe and control all functions of the mill.

The Accu-Trac comes equipped as a portable mill. After towing the mill from Alabama to North Carolina, Joe removed the wheels, trailer hitch and lighting system, and constructed some additional jacks to help keep the mill stable. To protect the mill from the elements, and to give some protection from the sun, he mounted the mill under a fly. When time and money permit, he plans to permanently mount the mill under a shelter.

The mill can handle logs up to 36 inches in diameter, up to 26 feet

long. The basic frame of the mill is made out of 3-by-6 inch steel tubing, 3/16 of an inch thick, with 2-inch square tubing used as cross-outs every two feet. Logs are loaded by an arm powered by two 3-by-10 inch hydraulic cylinders. The log turner is constructed out of 120 roller chain driven by a hydraulic motor. Joe commented that the loader and turner easily handled all of the material he has sawn.

The log dogs consist of three basic components. The uprights can be raised or lowered by being tied together in series. Thus when opening up a new log or when edging

boards, the uprights are in the full vertical position. As the log becomes a smaller cant, or the boards are edged on one side and are flipped over to edge the opposite side, the uprights can be adjusted to a lower height. Two hydraulically powered clamps secure the cants or boards to the frame of the mill.

Also to help hold the cant or board in position, there are teeth protruding on the cross arms of the frame that the cants or boards are pushed against by the hydraulic dogs.

I would suggest adding hydraulic clamps along the length of the mill. This would help while sawing longer

Cook's Accu-Trac 36-30 Spec Sheet

NAME & MODEL NUMBER

Cook's Accu-Trac 36-30 Electric

MANUFACTURER & ADDRESS

Cook's Saw & Machine
160 Ken Lane, Newton, AL 36352
334-692-5074

MILL OVERVIEW

Band or Circle Mill: Band

Stationary or Portable: Portable

Standard: Hydraulic feed, log loader, log turner, board drag back.

Cutting Capacity: (diameter and length): 36-inch diameter, 26-foot length

Weight: 3,800 pounds

Length & Width: 30 feet by 8 feet, 4 inches

FRAME & CARRIAGE

Size and Construction of Frame: 3 x 6 x 3/16 main beams with 2 x 2 cross-outs every 24 inches

Tracks are Made of: 1 x 1 1/4-inch angle iron

Are the Tracks Replaceable? Yes

Wheels are Made of: Solid steel with two roller bearings inside

Carriage Bearings: 7/8-inch I.D. by 2-inch O.D.

Carriage Support System: 4-post head frame

SAWING HEAD

Wheel Diameter: 26 inch rubber filled

Wheel Face: 1 inch

Wheel Construction: Cast iron with urethane rubber fill

Wheel Shaft: 1 7/8 inches with two 3-inch O.D. tapered roller bearings 6 inches apart

Wheel Speed (RPM): 855

Saw Speed (SFPM): 5,760

Recommended Saw Blade: 1 1/2 x 7/8 x .042 inches

GUIDES AND STRAIN SYSTEM

Type of Guides: Adjustable roller

Strain System Used: 840-pound spring with hinge system

Wheel Tilting System: Adjustable hinge

NETWORKS

Method of Setwork Drive: Hydraulic with switch for fine adjustments

Set Display: 4 scales, 1, 4/4, 5/4, 6/4

Automatic Sets? Optional—Digital readout

ALIGNMENT

How is Alignment Done at Factory?

Every mill is run and adjusted after a few logs are sawed before it leaves the factory.

POWER PLANT

Standard: 30 HP Elec.

Optional: 25 HP Kohler, 35 HP Wisconsin, 50 HP Volkswagen Diesel

LOG TURNER

120 roller chain drive by 1 1/2 shafts and hydraulic motor

LOG LOADER

Two 3 x 10 cylinders capable of lifting 8,000 pounds

LOG DOGS

Hydraulic motor hooked in series; clamps are tightened with hydraulic cylinders

CARRIAGE FEED DRIVE

Type (hydraulic, electrical, mechanical, or manual): Chain pull

Forward Speed: 45 feet per minute (average)

Reverse Speed: 160 feet per minute

TOWING

Wheels are four ply, 7.00 x 15; electric brakes are optional

Towing Weight/Tongue Weight: Towing, 3,750 pounds, Tongue, 175 pounds

GUARANTEE:

1 year on parts and frame

OPTIONS AVAILABLE

Computer networks, debarker, cant kick-out, hydraulic arms for short logs

BASE PRICE

\$28,975



The Cook's Accu-Trac 36-30 Electric is capable of heavy-duty production.

logs, wood species that contain a lot of spring such as yellow poplar, and products that require more accuracy.

Typically for a large commercial hardwood operation, a carriage capable of sawing 16-foot long logs would be specified with three or four knees, each knee containing a log dogging mechanism. Cook's offers these as an option.

The sawing head consists of a four-post frame design. Cook's uses larger diameter bandwheels than most manufacturers, 26 inches in diameter. The wheels are cast pulleys filled with molded neoprene rubber surfaces, mounted on a hardened steel shaft that is supported by two tapered rolling bearings. The band is strained using a spring that is compressed using a screw.

The company has paid a great deal of attention to the saw guide system. One guide is stationary, while the operator can continuously move the other guide in relation to the log via a hydraulic cylinder. Normally, Joe keeps the movable guide 3 to 4 inches above the cut. The guides are roller guides that are fully adjustable. Joe greases the roller guides approximately every hour of operation.

The mill comes equipped with a simple alignment jig so the guides can be adjusted in order to have the saw parallel with the direction of cut. To help align the mill Joe uses a laser level.

The mill can accommodate either 1-1/4 or 1-1/2 inch wide blades. Joe uses the 1-1/2 inch wide blades by 0.042 inches in thickness and feels he gets good

(Continued on page 33)

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PORTABLE SAWMILL *Review*

(Continued from page 7)

accuracy from these blades. Because of time constraints, Joe sends his blades back to Cook's to be resharpened. This costs, including shipping, approximately \$8. He changes blades every two hours or every 500 to 1,000 board feet of production. To get the proper tracking of the blade on the band-wheel when changing saw blades, Joe mounts the blade as close as he can. Then as he tightens the strain, he rotates the band wheels to insure the blade is on the proper track.

The mill came equipped with an optional mud saw to debark and clean the log in front of the bandsaw blade by cutting away the bark and dirt by a rotating



Joe Slater mills recycled logs into packaging timber and framing lumber.

series of stacked circular saw blades. Joe is experimenting with an adjustable dado blade, also known as a wobble head. He feels that it is more aggressive than the factory-supplied blade.

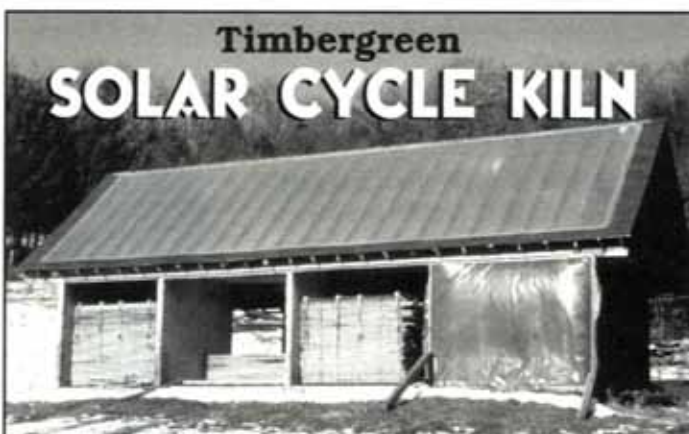
Joe also modified the blade lubrication system. The factory-supplied lubrication system is a water

pump system that only sprays when the saw head is moving forward. Joe uses this system with a water and Fantastic mixture for hardwoods. For softwoods he added a drip system using a mixture of kerosene and chainsaw bar oil.

As his system has a drip sight glass and Joe lubri-

cates the blade only when the sawhead is in forward mode, he's able to limit contamination.

The Accu-Trac 36 can be equipped with a 30 horsepower electric motor, a 35 horsepower gas engine or a 50 horsepower diesel power plant. Joe chose the electric option because it is quiet and can be stopped and started frequently without problems. To run the 220-volt motor Joe needed a three-phase power supply. As an option, he purchased from Cook's a rotary phase converter that changes the single-phase power supplied by the utility company to three-phase power. Joe seemed pleased with this option since the power company wanted more



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money to run three-phase power to his site.

The mill reviewed came equipped with an electronic setworks that is optional. Joe said that he considers the electronic setworks not an option, but a necessity. The setworks allows him to increase his production and saw accurate lumber, and requires less mental effort.

The setworks have two programmed sets. An operator can reprogram two new sets in less than a minute.

Joe stated that the maximum production is around 2,500 board feet per day. During my visit I timed one large oak log that was sawn into furniture lumber. Based on this product mix and the small end



Joe Slater (center) is assisted by his father, Frank, and his father-in-law, Jim "Chief" Millirons.

diameter of the log being 17 inches, I estimated that approximately 2,300 board feet could be produced in a day. The lumber that was produced varied no more than 1/32 of an inch end to end.

The drag-back on this

machine helps eliminate manual labor, which is a nice feature. After each cut, the saw head is raised half an inch. As the head returns to the operator's end of the track, fingers drag the sawn board back towards the operator.

The logs are loaded from the right-hand side (looking from the operator's position) using the log loading arms. When sawing a log, Frank and Chief throw the slabs off to the left-hand side of the mill. As Joe saws boards that need to be edged later on, Frank and Chief cradle these boards in the log loading arms. Finished boards are dragged back to the operator's position, where they are stacked. The operator then edges the flitches cradled in the log load arms.

Joe is limited on the time that he can spend sawing. His sawing patterns are not designed to be the most efficient in terms of grade and volume recovery. Frank noted this, saying he wished he had

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some of the upper grade boards being sold as packaging lumber when he was making cabinets.

However, Joe's sawing patterns are efficient in moving volume across the mill. Often generating three or more 4-inch squares at each pass of the sawhead, Joe also saws for the packaging market because this market accepts the lumber produced from the wide array of species and quality of logs brought to the landfill. If he started sawing for a specific grade market, he would have to go out and look for logs. And he does not want to get into the log buying business.

Many of his customers bring short logs to the landfill. To efficiently saw this short material, Joe fabri-

icated a jig to hold short logs. He has also developed markets and uses that will accept this short-length material.

In the future, Joe is planning to add an edger to speed up the operation. Instead of spending time edging boards on the bandmill, he could saw more logs. He is also looking at lumber drying, and various small kiln options.

Joe believes in maintaining his equipment so that he can run it hard. One innovative idea he has for lubricating roller chain drives is using a dry lubricant such as graphite. If oil is used as a lubricant, the tendency is for the chain to collect dirt, prematurely wearing the roller chain.

About maintaining the

mill, Joe stated "that there are grease fittings wherever there needs to be one."

I asked Joe if he had any problems with the mill or the service received from Cook's. He said that he had received excellent support from the Cook brothers. He had one cable that had twisted and broken. Cook's Saw and Machine sent him another one free of charge via overnight delivery.

My overall impression of the Accu-Trac 36-30 Electric portable bandmill is that it is a well-thought out and well-built machine. It should be of great interest for those individuals looking to purchase a heavier, higher production machine. ■

Joe Denig is a Wood Products Extension Specialist at North Carolina State University's College of Forest Resources.

MANUFACTURER'S COMMENTS

This mill operates from one end, and requires no walking with the saw or to pick up boards. One man can operate the machine, though more production is generated by two. The mill is used by people custom cutting and commercial cutting both hardwoods and softwoods.

Two men with an edger cutting grade 4/4 hardwood (oak) can saw 2,000-2,500 board feet per day. Two men cutting 2-inch pine can saw 3,000-3,500 board feet per day.

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