

# NEWSBLAST

November 2001

## HRS Report - Black Liquor Evaporator Cleaning

In the paper-making process, lignin is produced from wood chips in a chemical mix called "black liquor". Ultimately the black liquor is processed to recover marketable oils, and energy by use as fuel in boilers. To make the black liquor combustible, water must be removed in Black Liquor Evaporators, which are vertical heat exchangers with 1,000 to 3,000 tubes, 25 to 68 ft. long, 2 inch diameter. As the evaporators foul and plug, BTU content of the waste fuel deteriorates as well as throughput - a costly problem requiring shutdown and cleaning. The job is usually done with two or more men standing on the tubesheet manually handling hoses. This has historically been an exhausting task using crude equipment. In many cases, the evaporators are not completely cleaned when time runs out, and the plant must be re-started. StoneAge's **Marten Tube Nozzle**, introduced in 1997, has improved evaporator tube cleaning productivity by a factor of 3 or more.



The new **HRS** powered hose reel is a proven solution to the remaining hose handling problems. Safety is improved by reducing tripping and fatigue hazards. Productivity is improved because cleaning can be done in both directions. Quality is improved because of steady, controlled advance rate of the hose. In a big process unit, time on-line means big money. Smart contractors are making a big impact with StoneAge technology. One contractor who operates two **Marten Tube Nozzles** per evaporator, reports overall cleaning time reduced from 60 to 36 hours with one less operator per shift using one **HRS**.

The original **HRS** prototype is shown at the left. Its owner Industrial Commercial Enterprises uses it routinely to clean a vertical tube

unit at a chicken rendering plant in Tulsa, Oklahoma since 1999.



The first **HRS** in Europe, shown being tested at Salotech International in the Netherlands, is at work at Dow Chemical. So whether the job is in a pulp mill, chicken rendering facility, chemical plant, or other; the right tools multiply a man's productivity and improve his safety. The **HRS** is making money for contractors in a wide variety of applications.



**Versatile  
Barracuda™ 4-Jet Head**



The new **Barracuda™ Head** has four 1/8 npt ports - all at 14°. Use all four for faster coverage, or just two for concentrated power. New **Attack Nozzle Tips** fit this head, which last longer than tungsten carbide tips at 20,000 psi. The new head can be installed in all older **Barracudas™**.



**4-Jets More Productive  
for Thin Coatings**

**2-Jets Best for  
Thick Deposits**

**STONEAGE**®

**WATERJET TOOLS**

970-259-2869 Phone 970-259-2868 FAX

<http://www.stoneagetools.com> © 10/01



## Maintenance Kit Changes

Almost all kits have been changed in content and price. Here is a complete listing of available kits, with a description. Individual components are also available.

**Operator's Manual** - The manual is free, and is shipped with each new tool. It includes a parts list and drawing, seal replacement, dis-assembly and assembly procedures, and troubleshooting. Call for a copy if yours is mis-placed.

**Service Kits** - Everything needed for routine operation. This is a single service kit including high pressure seal, critical o-rings, a seat for the high pressure seal (in some cases), 6 oz. of viscous fluid for the rotation speed control governor (where applicable), fill tube or syringe needed to service the tool. Call for specific kit content.

**Seal Kits** - Identical to Service Kit, but excludes viscous fluid, fill tube, and syringe. For customers who already have these items.

**Overhaul Kits** - Everything that normally wears out. Includes a single high pressure seal and seat, shaft seals, bearings, 6 oz. viscous fluid (where applicable). Call for specific kit content.

**Tool Kits** - Different for every StoneAge tool, special tools for seating shaft seals, adjustments, etc.

**Lubricants** - These are available in their manufacturers' packaging, for customers' convenience.



STONEAGE TOOL MODEL	SERVICE KIT	SEAL KIT	OVERHAUL KIT	TOOL KIT	LUBRICANT
Barracuda	BC 600	BC 602	BC 610	BC 612	GP 042
CyClean 3D	CY 600	CY 602	CY 610	CY 612	BJ 048-S
Hurricane 3D	HC 600	HC 602	HC 610	HC 612	BJ 048-S
BJV (Obsolete)	BJ 600-X	BJ 602	BJ 610-X	BJ 612	BJ 048-X
BJV-M	BJ 600-M-X	BJ 602-M	BJ 610-M-X	BJ 612	BJ 048-X
BJV-20K	AR 600-X	AR 602	AR 610-X	AR 612	BJ 048-X
RJV	RJ 600-X	RJ 602	RJ 610-X	RJ 612	BJ 048-X
RJV3 (Obsolete)	RJ 600-K	RJ 602-K	RJ 610-K	RJ 612	RJ 048-VF
Gopher	AS 600	AS 602	AS 610	AS 612	GP 044
Marten	MT 600	MT 602	MT 610	MT 612	BJ 048-S
Ferret	FT 600	FT 602	FT 610	FT 612	BJ 048-S
Warthog WS-1/2	WS 600	WS 602	WS 610	WS 612	BJ 048-F
Warthog WH-1/2 & 3/4	WH 600	WH 602	WH 610	WH 612	BJ 048-F
Warthog WG-1	WG 600	WG 602	WG 610	WG 612	BJ 048-F
BJV-H	BJ 600-H-X	BJ 602-H	BJ 610-H-X	BJ 612	BJ 048-X
CST	CST 600		CST 610		GP 048
SA 1900, 1909	HI 600		HI 610		GP 048
SA 2000, 2012	FS 600	FS 602	FS 610	FS 612	GP 048
SL-P8P4	SL 600-P		SL 610-P	SL 612	GP 048
SL-A9AV9	SL 600-K		SL 610-K	SL 612	GP 048
SG-P8P8 & SG-A12AV12	SG 600		SG 610	SG 612	GP 048
SG-P12P12-M & SG-A16A16	SG 600-M		SG 610-M	SG 612	GP 048
SG-CCN	SG 600-CCN		SG 610-CCN	SG 612	GP 048
SH-P8P8	SH 600		SH 610		GP 048
HI	HI 600		HI 610		GP 048
FS	FS 600	FS 602	FS 610	FS 612	GP 048
HF	FS 600	FS 602	HF 610		GP 048
HF-2D	FS 600	FS 602	HF 610		HF 042
OQ	FS 600	FS 602	OQ 610		GP 048

Note: "X" indicates "Fast" or "Slow" rotation speed range, please specify.

## Lubricants & Sealant - Available **NOW!**

StoneAge now stocks lubricants and sealants recommended for use with our tools.

LUBRICANTS	STONEAGE PART #	QUANTITY	SOURCE	SPECIFICATION
Viscous Fluid	BJ 048-X, RJ 048-VF	6 oz.	StoneAge	Synthetic silicone lubricant
Air Motor Oil	GP 041	32 oz.	Mobil	Almo 525 Air Tool Oil - ISO Grade 46, SAE 10
Hydraulic Oil	HF 042	1 Gal (US)	Texaco	Rando HD 68, ISO VG 68
Auto Transmission Fluid	GP 042	32 oz.	NAPA	Mercon/Dexron ATF
Motor Oil	GP 044	32 oz.	NAPA	10W40 Motor Oil
Gearbox Lube	GP 046	32 oz.	NAPA	Premium Gear Oil 80W-85W-90
Thread Sealant	GP 047	4 oz.	Parker	Thread Mate
Grease	GP 048	14 oz.	Mobil	Synthetic Lubricating Grease SHC 100



**WATERJET TOOLS**

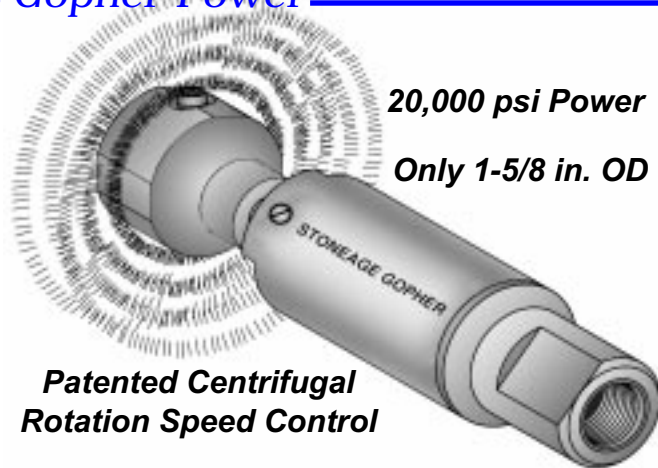
970-259-2869 Phone 970-259-2868 FAX

<http://www.stoneagetools.com>

© 10/01

## California Hydroblasting Harnesses Gopher Power

This Fresno contractor cleans a process unit in a dairy products plant with 400 vertical tubes, 2 in. OD, 55 ft. long. A thin, but very hard silica scale builds up, that must be removed from the tube walls to the satisfaction of an inspector from the US Dept. of Agriculture. Owner Phil Engleman reports that cleaning at 10,000 to 15,000 psi, usually results in about 50% of the tubes being rejected by the inspector. They have to be jetted again, before the unit can be re-started. It's an ideal application for 20,000 psi waterblast tools. StoneAge's **Gopher**, introduced earlier this year gave Phil a chance to prove the value of higher pressures. The Gopher was so much more effective, that only 4 tubes had to be re-jetted. "Anything less than 20,000 psi just doesn't work" according to Phil Engleman.



**20,000 psi Power**

**Only 1-5/8 in. OD**

**Patented Centrifugal  
Rotation Speed Control**

### **NEW** SpinCat Introduced



**Patented centrifugal rotation control brings new versatility, and elevated temperatures tolerance for coil tubing applications.**

StoneAge distributor Nortech Systems showed a new prototype to customers attending their recent open house in Aberdeen. This 2D rotating nozzle replaces the old **DMV** for downhole coil tubing applications. It will handle up to 2 bbl/min. The **SpinCat** uses StoneAge's patented centrifugal rotation control technology which allows wider ranges of flows and operating temperatures than ever before. **SpinCat** testing successfully up to 400°F. The single piece head and shaft

eliminates the possibility of the head coming loose or being knocked off the tool. Nortech plans to demonstrate the prototype in North Sea wells in the next few months. It should be the "cat's meow" for descaling, paraffin wax removal, and other coil tubing jobs. Please call us if you think you might need this tough new tool.



Brian Storie  
Nortech  
Systems Ltd.

### Extension Nipples - Stainless Steel Only!

Since heavy-wall carbon steel nipples look similar to thin-wall nipples available in hardware stores everywhere, it's easy for the inadequate light-gauge nipples to escape preliminary safety inspections on the job. StoneAge will therefore phase out all carbon steel pipe extension nipples, and will only supply 304 stainless steel. European customers have preferred stainless steel nipples for a long time, to avoid rust particles that eventually come loose and plug jets.



### Shipping Tips International

To minimize the costs of courier delivery and customs clearance, Carrie Grant suggests that orders be combined. Several StoneAge customers do this now, by ordering through the week, with the entire week's worth combined and shipped out on Friday. It is also possible to save 25-35% by using UPS Expedited service instead of UPS Express. It takes another couple of days. The less-expensive service is not available at every location, but it's a good deal where it is!



**WATERJET TOOLS**

970-259-2869 Phone 970-259-2868 FAX

<http://www.stoneagetools.com>

© 10/01

StoneAge, Inc.  
P.O. Box 2907  
Durango, CO 81302  
RETURN SERVICE REQUESTED

PRSR  
U.S. POSTAGE  
PAID  
DURANGO, CO  
PERMIT NO. 477

## Maintenance Videos By Mr. Fix-It Bill Shires



While we take pride in the fact that most repairs can be done by the customer in the field, sometimes it makes sense to get help from the pros. StoneAge offers Maintenance & Repair Videos, as well as repair services by the same people who assemble new tools.

Our newest video release “**CyClean 3D Procedures**” is now available to help customers troubleshoot, repair, and maintain the tool at their shop. Others available include “**Hurricane 3D**” and “**Barracuda, Marten, and Ferret**”. Call for a copy if you need one.

Bill is the lead contact at StoneAge for repairs. Call him before sending your tool in, and he will make sure the shop knows all the details before they start to work. He needs to know what tool is being returned, when, the nature of the problem, whom to contact at what phone number, the company, and return shipping instructions. It also helps if we know the serial number of the tool.

StoneAge does a complete overhaul of every tool repaired, in order to be confident that it is ready for operation when it is returned. We document all findings, repairs, and tests. Ask if you want to see all this information. Repair estimates are also available.

Most repairs at StoneAge are completed, with the unit tested, and shipped the next day after they are received. 3D nozzles like the **Hurricane** and **CyClean** require a day longer. Labor charges are \$ 45/hr, with a 1 hour minimum.

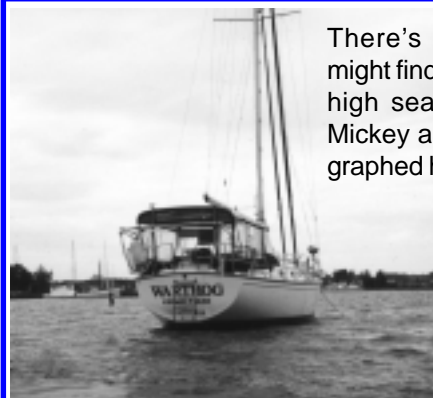


**FCSM**



This new, compact unit for scuffing concrete decks for re-surfacing is easy to handle in tight quarters. Like its larger cousin, it is available in 15 kpsi or 20 kpsi MAWP.

It cleans a 15 inch wide path. The smaller path allows the operator to move at a faster pace than with a 24 inch wide path. The **FCSM** is available now!



There's no limit to where you might find a **Warthog**, even on the high seas! Thanks to cruisers Mickey and Carla Murphy photographed here in St. Michaels, MD.



## Trade Show Calendar

We look forward to seeing customers at the Pumper/Cleaner Environmental Exposition in Nashville, Tennessee February 27 through March 2. Our booth has moved upstairs to the Delta Ballroom, #S2. On Wednesday February 27, Mark House will present a seminar “High Powered Waterjet Cleaning of Sewer Pipes” in the Presidential Ballroom A & B, at 4:30 PM. Plan to attend. © 10/01



**WATERJET TOOLS**

970-259-2869 Phone 970-259-2868 FAX  
<http://www.stoneagetools.com>

