

“Ahight - Divers, you need to strip that tron stuff off where the riser been cut below the Plus Ten so this here CGF will go on. Shouldn't take you too long. It's just rubber...”

So as long as there's been diving in the oilfield, Splashtron has been around from almost the start. It's used most often to protect risers where they pass through the air/water interface. Also seen occasionally on conductors and structural members, it does its job and does it well. You know this with sincerity if you have ever had to remove it. Just rubber, my ass.

What exactly is Splashtron, and do the people that make it have any techniques for getting it off pipe quickly?

The quick answers are: A proprietary elastomer, and No. But they've been around the block with this stuff more than a few times and have a pretty good trick to pass on for taking it off by hand. Read on.

In the early 1950's, the various coatings and epoxies used offshore to protect steel in the splash zone were not holding up very well at all to the abrasive effects of waves laden with sand and shell fragments. It was pretty obvious to a man named Bill Moore that there was room for improvement and so he got to experimenting with various rubber compounds and methods for applying them. In 1954, Shell Oil and Placid Oil tested Moore's coating offshore and Bill Moore has been coating pipe ever since.

Any piece of steel anywhere in the world that's coated with Splashtron came through Moore's plant in Garden City, Louisiana. There are a few exceptions: Moore has tried licensing his coating process to a couple of different overseas outfits over the years, but they burned him every time so he said to hell with this, everything comes through here from now on. There are also some other coating companies kicking around trying to mix up something better than Splashtron but they must not be too good at it; Moore says sometimes his overseas customers will ship pipe to the USA just to have it coated and then have it shipped back to them. Our Billy-boy has got it sewn up because his coating is practically indestructible and once bonded to the pipe is practically un-removable. Good news for him; bad news for Divers. Actually, bad news for Tenders.

Some good news for dive crews: we're not the only hands to be tormented by Splashtron. It happens occasionally that engineers who spec out the coating for a job get it wrong (there's a surprise) and call the plant to change up their order when it's too late and the pipe is already coated. Moore says getting Splashtron off the pipe costs about three times as much as it does to put it on; most of the time it's cheaper to buy more pipe.



Bill L Moore, inventor of Splashtron, outside his facility in Garden City, LA.
All photos in this article Offshore Diver Magazine 2007.

Moore smiles a lot and he's smiling when he says: "For some reason they usually just say go ahead and take it back off."

Moore's company has tried a lot of different removal methods over the years. Like chaining the pipe down and using a fork lift to rip the Splashtron off a strip at a time, or getting two hands with pair of tongs and a razor knife to peel it off. They've even tried melting it off. Moore says that doesn't work too well and just makes one hell of a mess. The best way they found so far is to put the entire pipe on a lathe and machine it off. And that's only in the last couple of years. As for one man having to do it by himself, Moore says technique is everything.



But first, here's how it goes on. Much of the process is a trade secret. Moore wasn't about to talk about all of it, but he took ODM through the plant and described in general terms what was going on.

Every piece they coat has first to be roughed up to establish an anchor profile for the coating to adhere to. Straight pipe and some risers ride a conveyor through a machine that does the work. Pipe with high radius bends and pieces too large for the machine are blasted by hand. This would include riser clamps (coating goes inside), large diameter pipe, and anything else that won't pass through the profiling tool. Moore's company has coated pipe in every O.D. from 1" to 95 1/2".

After roughing, the pipe goes onto a huge lathe where it slowly revolves while the guy doing the application hand lays a strip a few inches wide. The strip is square cut on one side and beveled on the other to let it each successive wrap lay up nice and snug against the last. This strip comes off a large spooling machine running on a track parallel to the lathe. Another operator controls the unspooling rate and rides the machine down the track while the applicator works between it and the lathe. ODM wasn't allowed to photograph the spooling machine or even look at it real hard. Same with the Splashtron itself. Moore pointed to some big drums at one end of the shop and said, "It's just rubber, but its secret rubber; our own formula. Don't

be looking over there." He also won't say how it's transformed from the base components in the drums to the nice uniform strip that wraps the pipe.

The fresh Splashtron on the pipe is warm and slightly tacky to the touch. Coming along several feet behind the applicator is another hand with a smaller version of the spooling machine. He wraps a strip of nylon tape tightly around the Splashtron that's just been laid. If you know anything about how hoses are made, the process is similar. Figure the pipe as being a giant mandrel.

After the pipe is wrapped and taped it goes into an oven. This oven is 85 feet long. Originally the oven was 45 feet long, but Moore began getting orders for pieces bigger than that. He got another oven, cut the end of the one he had, and welded them together. How hot is the Oven? Trade secret.

After the pipe has been cooked, it comes out of the oven, the nylon tape is removed, and you got your finished riser segment. Every riser you ever inspected went through all this just so you could tell your dive sup, Yep, Still good.

continued...

Blisters – don't puncture them. Splashtron has been seen to contain product at hundreds of PSI when a pipe wall has corroded through beneath it. That blister at the Plus Ten might be nothing or it might be pressured up and just waiting for some knucklehead to come along and stab it with his knife.

Splashtron

Bill Moore's best removal technique for a hand working alone:

You're going to need a box cutter and a pair of vice-grips.

Take your box cutter and slice the coating lengthwise about every two inches to make long strips. Go all the way around the area to be cleaned. Make sure you cut it all the way through to the steel beneath. For smaller OD's, make the strip narrow enough that it does not have a whole lot of curve to it.

Take the vice-grips and grab a hold of the top end of one of the strips. You might need to use the box cutter to get the strip started enough to get at it with the vice-grips.

Once the strip is started, pull it away from the pipe with the vice-grips and use the box cutter to slice across where the backside of the Splashtron is still bonded to the pipe.

Pull and slice.

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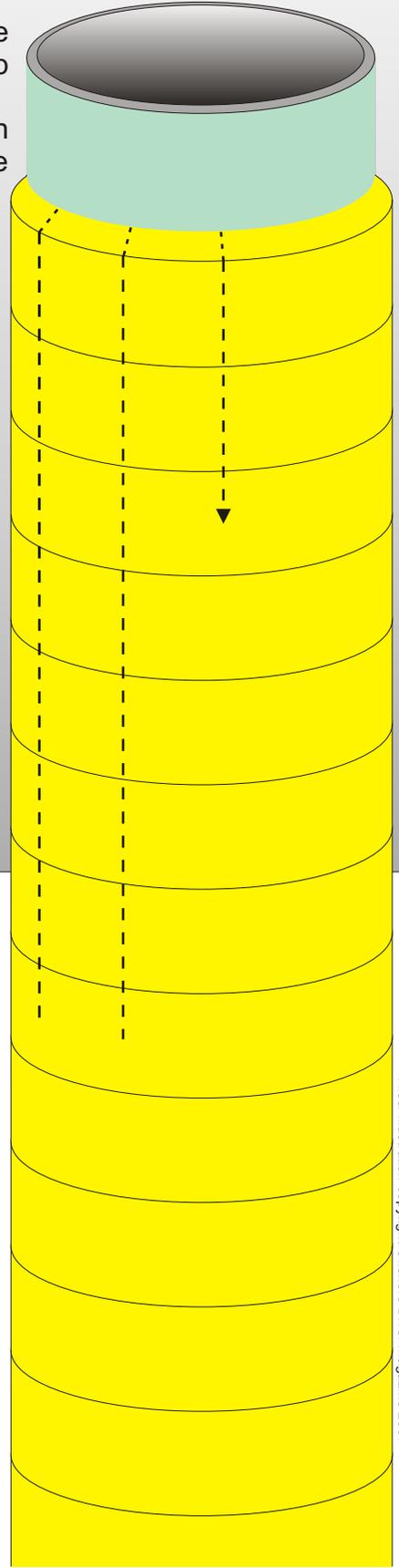
Pull and slice...

You can see where this is going.

"Just like skinning a fish," says Moore.

You should end up with a strip of Splashtron about two inches wide and however long as the area you have to clean. Continue all the way around. You will probably need a grinder and a barnacle buster or a zeke when you're done pulling strips because there will almost certainly be quite a few little fragments still adhering to the pipe and they ain't gonna just jump off.

Many company reps are a little edgy about using a barnacle buster to prep pipe for an end connector because of the tiny dimples it leaves, and if you toe in a zeke pad too much it will very quickly cut deep enough to spoil the sealing surface, so you are on your own there. Putting a cup brush on that grinder is an effective way to get rid of the fragments but does not work as fast as the buster or the zeke.



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issue.

Splashtron

If you haven't got a box cutter or something equally sharp, or if you do, but Shell owns the riser, here's a few other ways to get rid of Splashtron, GOM style:

Hacksaw

Run a grinder gently along both sides of the toothed edge of the blade until it's sharp like a knife but still has teeth. Cut strips of coating off the pipe in such a way that the hacksaw blade is pressed against the steel the whole time. This works pretty good, but you're going to go through a lot of hacksaw blades and you will still need to go over the whole area to remove fragments when you're done hacksawing.

Paint Scraper

Need a maul, too. About a four pounder. Any heavier and you'll be hating life that much sooner. Make sure the paint scraper is sharp. Use it like a chisel and pound the hell out of it with the maul to take the coating off in chunks. Watch the pipe doesn't get dinged. This takes forever.



Moore with his two longest serving hands. That's Frank on the left; with Mark Tool for 31 years, and Norman on the right; 26 years. If you ever see a joint of pipe coated with Splashtron and at one end it says "Papoo" - it's one of Norman's.



Riser clamps waiting to be lined with Splashtron. Splashtron can also be used for J-tube pulls. It's a mix called Splashtron FM, which stands for Friction Modified. It protects the pipe as usual, but it's a little slicker to ease the pull through the J-tube. A Splashtron centralizer plug around the pipe at the end of the pull centers the riser in the bottom annulus.

Zeke Pad

Works, but slow. Difficult to tell when you're through the Splashtron and into the steel. Be careful. Almost certainly guaranteed to freak out your company man when he walks into the dive shack and sees steel shavings on the video.

Barnacle Buster, Cup Brush

Not worth crap until you're almost done by some other method.

Faith

You could also try wishing it off, but that has never worked yet.



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ODM would like to thank Moore and his employees for taking the time to talk to some guy that just dropped in one day with a bag full of questions. Real nice people, all.