

THURSDAY, MARCH 1, 1923.

BUSINESS IS BUSINESS

Business is business, but men are men.  
Working, living and dreaming,  
Trolling with hammer, brush or pen,  
Boistering, plotting, scheming.

Business is business, but life's too  
Whose business has grown to smooth  
His faith in god and the Golden Rule  
His love for friends and brother.

Business is business, but life is life,  
So we all in this game to win it,  
Let's not forget the heat from the heat  
And strife.

And try to be friends a minute.

Let's seek to be comrades now and  
Then  
And we're from our golden bather,  
Business is business, but men are men.  
And we're all good friends together.

—Tom Draper.

HOW INSULATION IS PUT ON WIRES

Examination of a piece of rubber-covered wire used in electrical work will, once make plain what a complicated process is required to prepare the rubber and, hence, the wire must be well-coated and smoothly polished.

During the last twenty years or so the manufacture of rubber-covered wire has increased by leaps and bounds. Many new types of insulation have been created and are operated at time both night and day to meet the demand for this material.

Now there are different grades of rubber-covered wire, differing only in the percentage of pure Para rubber they contain.

The crude "up-river" rubber is received at the factory in large solid masses sometimes weighing several thousand pounds. It is placed in a large tank filled with hot water, and left there until the rubber becomes sufficiently soft to allow it sufficient time to settle and become pliable.

The rubber sheet is now taken into a drying room and hung on supports from the ceiling. At this point different manufacturers employ different methods for drying the rubber.

One method, for instance, which

requires only two days, and others let it dry naturally in from ten to fourteen days. It is not yet definitely determined which is best.

When it has been thoroughly dried, the sheet is taken to a set of rollers about fifteen inches in diameter and wide enough to accommodate the width of the tank. The tank is then run through two corrugated iron rolls which form the rubber into a thin sheet, the rubber being passed together and the thickness of the rubber thus determined.

At this stage the rolls are placed close together and the reclaimed rubber (old rubber, automobile tires, etc.) which has been previously prepared through a series of such sulphur, blower and other ingredients which each manufacturer keeps a secret, is now run through the rolls with the same result.

The rolls are adjustable and the sheet is now removed from the rolls and other sheets similarly prepared are laid on, until the mass becomes about two inches thick. This mass is then pressed under a press and finally pressed together.

The composite sheet formed as above is then cut into strips about two inches wide and fed into a machine that cuts them through a series of knives of about one-hundred meshes. When the rubber comes from this machine it is entirely free from all foreign matter, which is then vulcanized on here it is fed into the laminating machine.

The force-feed action of this machine is similar to that in a meat chopper or sausages grinder. At the end of the process the sheet is hollow iron box which contains the dies, one "male" and one "female."

The male die in the shape of a cone containing a hole through the centre axially is inserted into the female die covered, the remainder contains the hole the exact size of the outside dimensions of the finished rubber-covered wire.

When the two dies meet a space of one-quarter of an inch is left and through this space the rubber is forced by enormous pressure by the worm. This pressure spreads evenly over the wire. This process is repeated in induction, although there are some methods whereby a seam is left in the covering.

When the rubber-covered wire emerges from this machine it is run through a power adaptation. This power converts the wire from sticking to anything with which it might come in contact.

It is now wound on a large iron drum about five feet in diameter. This is the wire used in the insulation of the transformer, which resembles in its iron tank, one end of it being removable to allow the passage of the drum covered with the wire.

The wires are then run through a hollow iron box which contains the dies, one "male" and one "female."

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After vulcanization, the wire is measured and wound from the drum into a coil and placed in a tank of water where it undergoes a test specification of the national fire insurance.

The test consists in placing the coil upon a reel. One wire from an electric voltmeter is attached to the end of the coil and the other end of the wire to the reel. The wire is then wound upon another reel, the wire passing through workman's hands. If the covering of the wire contains a plow, whose hands it is passing through, the plow is required and the plow is required with more rubber.

After the wire has been thoroughly tested it is run through a braiding machine, where a cotton covering is put on. The braiding machine contains spools of cotton string placed vertically to the wire. The wire is then run through a wire passing through workman's hands. If the covering of the wire contains a plow, whose hands it is passing through, the plow is required and the plow is required with more rubber.

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Between the first braid and the rubber is placed the trade mark of the maker. This consists of threads of several colors, manufactured, of course, using his signature and distinct colors. These colored threads are also woven in by the braiding machine.

From the braiding machine the wire is run through an insulating varnish and afterwards, again in the wire, it is then run through a wax bath, which gives it a sleek polished surface.

The wire is then once more tested for breakage, and made up in packages of the wire, number of miles and weight. Paper or cloth is wrapped around the coil containing from 100 to 500 feet, and then sent to the stockroom, where it is ready for sale.—Edwin W. Tarrance.

Everything without tells the individual that he is nothing; everything within peragues him that he is everything.—X. Doutant.



The Old Man of the Big Clock

By Tom Draper

Acton, Ont.

Illustration by Tom Draper

Photo by Tom Draper

Illustration by Tom Draper

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