

Buying used Extrusion Equipment

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Buying used extrusion equipment

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Buying used equipment is almost as risky as getting married.

If you are low in capital or faced with limited borrowing power, the decision is to consider used equipment. The need for short delivery time is another consideration for purchasing used equipment - immediate delivery. It is tougher than gambling on a used car, where you or a good mechanic can check out the car thoroughly. Buying used extrusion equipment is a different ball game.

The extruder is the heart of the line and its components must be examined carefully. Knowing the background of the unit may help, but assume the extruder is buried in an acre of used equipment resembling the remnants of the Persian Gulf War!

The screw and barrel are critical components. Close examination of the screw may show abrasive wear or etching that took place in production. Measuring the flight and root diameters will reveal wear as well as the leading edges of the flights. Observing the screw on a flat surface can indicate bowing.

A bowed screw will do harm to the cylinder which will need replacing. The die clamp area should be checked for bowing, dents, or damage. Overlooking this could cause die leaking in production. Run your hand down and around the extruder throat. Is it rough? If so, it may be rusty from moisture or possibly from a fire. Gears in the extruder are important. Without oil, rust and etching may result in the box. If not cleaned, the gears will be damaged. Water from a fire would also cause rusting. If there is oil in the gear box, run your fingers through the oil. Any evidence of hard particles might be evidence of gear wear and/or misalignment. Replacing gears can be expensive.

In selecting an extruder and line, you should have an idea on the size needed for your products. Don't consider a 4-1/2" machine when you're planning to run small tubing or light-weight profiles, unless the cooling and take away equipment is fast enough. This happened to me with a new machine extruding polyethylene pipe; the puller and pipe coiler could not keep up with extruder output! (Live and learn).

When checking the motor, examine the insulation on the primary wire for dryness and flaking or cracking. This indicates that the motor may need rewinding. Make sure the motor is large enough for the extruder and the material to be extruded. Years ago, extruders were under powered. Check with an extruder manufacturer for motor sizes.

Check the die holder and clamp for dents, bowing, or damage. Poor clamping of the die will result in material drooling, possibly lowering output and creating lower head pressure.

Numerous times, used extruders may include dies. It would be unusual to use salvage dies. There can be parts of a die that are useful, but don't get carried away! Many times the dies are rusty, full of material, nicked, scratched and in most cases, will need remachining to suit your profiles.

Where do you go for used machinery? There are numerous companies specializing in used extrusion equipment. Choose one that has been in business for a long time. The Green Sheet paper from Delray Beach, Florida issues a monthly brochure that is full of all kinds of used equipment sold by many companies and geared for the plastic and chemical business. To subscribe cost \$25 for life!

To Summarize:

1. Go over the extruder with a fine tooth comb (screw, barrel, throat, gears, motor, etc.)
2. Learn the history of the equipment.
3. Check for any evidence for fire or water damage.
4. Water and vacuum pumps cannot be idle for many months. If left unused, be prepared to have them overhauled.
5. Don't jump at the asking price--make them an offer or have another piece of equipment thrown in - dryer,

preheater, etc.

6. Deal with a large, reputable supplier.

As you can see, there is a certain gamble in considering used equipment. Then too, if you know the girl real well, perhaps the gamble isn't so bad!

- D. Biklen, Springbriar

See also:

- How to buy a screw - Part II
- How to buy a screw - Part I
- Is used equipment worth the effort?
- Old vs. new extruders
- Used extruders

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