

SOURCING SCRAP METAL TO MELT.

Foundry info for the hobby metal caster. Supplied by: myhomefoundry.com

Notes from issue 02 of: The **Hot Metal ezine**
SOURCING SCRAP AL METAL.

Do you think of empty Al drink cans when looking for scrap AL? It may appeal to the newbie metal caster as a cheap, easy to collect source of scrap, many have tried to melt Al cans, only to be disappointed with the results.

The BIG metal recyclers do melt Al cans, but they are compacted first into large solid cubes and dumped into the melting furnace which is already half full of molten metal.

If the hobby caster tries to melt cans in a crucible, the light alloy just burn's away, and doesn't produce good metal to pour into an ingot. It's simply a waste of valuable gas.

The best source of AL for scrap is:

- > Discarded automotive inlet manifolds.
- > Gearbox casings (clean).
- > Cylinder heads.
- > Cast alloy brackets etc.
- > Old cast alloy V belt pulleys
- > Junked cast Al lawn mower chassis.

Automotive cylinder heads need to be cut up into smaller chunks so that they can be melted down and poured into ingots.

Any other item can be smashed up with a large persuader, (sledgehammer)

Cylinder heads offer large amounts of metal for remelting, the trick is to find someone who can cut the cylinder head into smaller chunks, a metal band saw is ideal.

The method used to remelt the alloy into ingots is to place the small chunks into a rectangular shaped steel melting pot.

This melting pot is placed on a good charcoal forge, the forge is run with a pretty hard air blast to get a good heat build up, the melt happens reasonably quick, other jobs can be attended in the workshop while the Alloy is melting. Just check on it every now and again.

Once the metal has melted it is poured into the ingot mould.

Recharge the charcoal in the forge; place another chunk of metal in the pot, and start the process all over again.

Any valve guides, seats & plugs etc, will sink to the bottom of the pot, just scoop these out between each melt.

When the ingots have cooled down, mark them with a texta marker to indicate what kind of metal it is. Eg piston alloy, cylinder head, etc.

There is no need to de gas the melt at this stage, carry out the degassing when you are remelting, and ready to pour a mould.

Old automotive pistons are OK, but have a high silicon content of around 10 to 13 %, the piston alloy casts OK, but does not machine very nice, if you mixed in some scrap alloy like Al extrusions, would change the composition into a softer alloy and could be used for non-load bearing objects or art castings.

Subscription to: The Hot Metal ezine is free, you can subscribe by clicking on the following link: <http://www.myhomefoundry.com/page7.htm>

Hobby foundry ebooks are available form our web site also.

Click here to go to the home page: <http://www.myhomefoundry.com/index.htm>

Contact email is: colin@myhomefoundry.com

Fax Number is: + 61 3 57 22 4654

Phone: + 61 3 57 222 446.