



*Cleaning of Aluminium Extrusion Dies*

# DIE-CLAR

The Most Advanced System for Diecleaning:

- Safe
- Automatic
- No more fumes
- Ecological



View of a DIE-CLAR tank

DIE-CLAR is a very innovative system for the cleaning of dies used in aluminium extrusion industry.

DIE-CLAR is a real answer to the different problems caused by the conventional dies pickling systems.

DIE-CLAR meets the expectations of the vast majority of the extrusion companies, as they are more and more sensitive to environmental friendly and economically efficient processes





### CONVENTIONAL METHODS

In the traditional method, dies are cleaned by dipping them into a caustic soda solution.

The caustic soda completely dissolves the aluminium metal, getting in this way the dies cleaned.

The solution of caustic soda rapidly enriches in dissolved aluminium content, hence reducing the dissolving power of the solution.

For this reason the caustic soda needs to be frequently replaced.

With the traditional method the dies cleaning is the cause of several problems, such as:

- Emissions of toxic fumes
- Unsafe operations for the workers
- Cost for the fresh caustic soda
- Cost for the waste/disposal of great quantities of spent caustic soda as toxic/hazardous waste
- No recovery of aluminium metal

### THE ADVANTAGES OF THE DIE-CLAR SYSTEM

DIE-CLAR consists of totally enclosed process tanks, in which the etching and water rinsing of the extrusion dies is carried out in a fully automatic way, thanks to a PLC controlled equipment and to an overhead crane which automatically handles the baskets containing the dies from the loading till the unloading area.

DIE-CLAR is also provided with a complete fumes exhaust system, which allows the ventilation and fumes cleaning of the treatment tank containing caustic soda.

The advantages of DIE-CLAR versus conventional methods are clear:

- *Fully automatic system*
- *Highly environmental friendly process*
- *Total enhancement of safety for workers*

DIE-CLAR has been specifically designed to work as the hart of a fully integrated recovery system, which includes an Aluminium Detachment Pre-treatment (ADP) and a final Recovery of Caustic Soda (Crystalfix). This integrated approach allows for:

- *Recovery of aluminium metal*
- *Recovery of caustic soda*
- *No spent toxic/hazardous waste to be disposed or to be treated*

### SIZING OF DIE-CLAR

The design of the different models of DIE-CLAR mainly depends on the output required in terms of dies cleaned per day.

Following is the model tables, making reference to dies Ø275 mm:

Die-Clar Model	Die-cleaning time	Total output per day
Model 30	8 hours	N. 30 dies in 3 shifts of 8 hours each
	12 hours	N. 20 dies in 2 shifts of 12 hours each
Model 60	8 hours	N. 60 dies in 3 shifts of 8 hours each
	12 hours	N. 40 dies in 2 shifts of 12 hours each
Model 120	8 hours	N. 120 dies in 3 shifts of 8 hours each
	12 hours	N. 80 dies in 2 shifts of 12 hours each



Die-Clar Model 60

### THE BASIC MODEL

DIE-CLAR is available in an alternative "basic" model, for which in instance the overhead crane should be arranged by the Customers; information on the basic model will be supplied on request.