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To the topic:

## Welding with the Drader Injectiweld for rotational molders

at the

**PEC-Pan European Rotomolding Conference,**  
World Trade Center, Brussels, 17-18. November 2000

First: What is refuse?

Here no economical definitions are to be endeavored. In practice also several kg are refuse, when approx. 5g plastic is missing in the correct place, because the product does not have the characteristics agreed with the customer. Here the Drader Injectiweld can help. These and other applications are explained.

Why welding with the Drader Injectiweld? Main application of welding with the Drader Injectiweld is doing over again produced parts:

Filling of piping, holes, corners and complicated forms.



Fig. 1a: Repair of parts with the Drader Injectiweld (welded for the picture with black welding rod).



Fig. 1b: Cut through a repaired part.

In this picture a tank is welded with the Drader Injectiweld. Here a black welding rod is used for a bright rotated product, so that the welding joint can be seen better. In practice a coloured exactly fitting welding rod is used.



Fig. 2: Examining welded holes.

The welded joints may not impair the characteristics and the quality of the produced products. The reduction of refuse is an important factor by the local costs reduction of a rotomolding plant for: personal, energy and machines, recycling and disposal and the costs of the missed use.

Welding is worthwhile itself:

the more larger the rotated parts are (kg/part),  
the more bigger the order books of the plant is,  
the more closely the production plan is,  
the more frequently the product change is.

Apart from the correct welding engineering it is likewise important to use suitable welding rod. Orbi-Tech produces welding rod out of the rotational raw material. The rotomolding plants sends us dyed powder. We manufacture the suitable welding rod. The welding rod has the same characteristics as the rotated part: The same raw material, the same color, the same gloss.

A suitable welding rod is a condition for an equally firm, durable and optically inconspicuous welding joint.

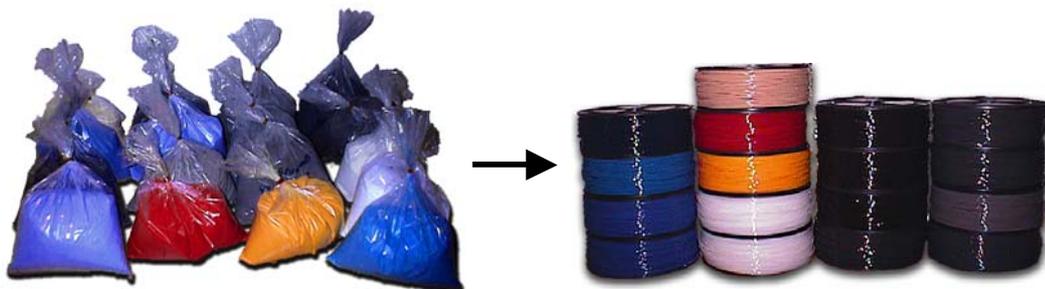


Fig. 3: Welding rod made of rotation powder.

A further important application is welding for the modification of the rotated part:

1. The building of prototypes as advancements of existing products. Prototypes are faster presented to the customer, as if the form must be converted again. Costs will be reduced and many different variants can be tried out within a short time.
2. Welding offers the possibility of adapting products to the needs of the customer.



Fig. 4a: fillet weld using the welding tip T 200001.



Fig 4b: Example of the modification of a small part.

The surface of the jointing parts does not need to be pre-treated. The surface which is to be welded is broken up and melted on with the hot welding tip. Into the melted surface extrudate is injected immediately with high pressure. The joining area is not additionally oxidized by hot air. The Drader Injectiweld is a handy welding machine developed on the basis of ergonomic criteria. It has a small weight, is quiet and can be served with one hand, so that one of the jointing parts can be held with the other hand.

We offer different welding tips for the Drader Injectiweld for different applications. Beside the standard welding tips we offer machine-laterally fitting blank tips. Welding tips are manufactured out of this blanks, which fit accurately in the individual case.



Fig. 5: Welding tips for different applications.

We offer solutions for your welding applications:

Development for welding engineering,  
Delivery of the machine and the exactly fitting welding rod,  
Training of the personnel.

We consider also different welding methods, like welding with heat-element welding rod. The Drader Injectiweld is called world-wide the rotomolders friend.

The principal reason is, that the Drader injectiweld is a large cost saver, in particular for repairing small defects.

Please contact us for your projects.

## - Sample calculation -

Repair welding for rotomolding with the Drader Injectiweld for the reduction of refuse ratio, professional welding of holes and piping:

Initial costs with accessories\* Euro 3.300,00

Annual costs including description interests,  
Maintenance and depreciation account = 25 % of  
Initial costs, costs per month Euro 68,75

machine costs per part  
at one repair a week Euro 17,19

Break-even is reached, when one part is repaired once a week and for each repaired part more than 17,19 Euro are saved.

Additional to be calculated:

Welding rod for each color and material  
Specific manufacturing of original rotation powder

Setup costs for each material or color change Euro 44,00  
For each spool approx.. 200 m Euro 44,00

Total costs for welding rod for each material and color Euro 88,00

One spool of welding rod is usually enough for the repair of several hundred parts.  
Larger quantities of welding rod on request.

Welding tips for welding ventilation holes: Manufacturing according to the desired diameter of the hemisphere at the welding tip up to 25mm.

Further welding tips for welding flanges and other applications are available.

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\* present price for the Drader Injectiweld including welding tip T 20003 for welding holes and piping (standard welding tip for rotomolders). Conditions: November 2001