- the quantity and the quality of the wastes requires a very expensive disposal or special measures to protect the health of the workers, or gives serious problems to the work environment

- the work environment has special sanitary requirements (food, pharmaceutical, electronic industry, etc.) which do not enable a great choice among the different cleaning systems. In the confectionery industry, for example, the cryogenic system is used to clean the nets of the ovens and the moulds

- paint-removing and cleaning must take place in high fire- or burst-risk areas (such as petrochemical and naval industry, and painting booth) or where there is hot equipment. The CO2 pellets are not electrically conductive.

It can be stated, as a whole, that the cryogenic shotblasting systems have proved to be really effective referring to the removal of:

- painting cycles, adherent coatings, paint coatings or ground coats, etc.

- different kinds of oil, grease, lubricants, anticorrosive agents (replacing the cleaning using either solvents or chemical agents)

- different kinds of wax, glue, resins, welding or brazing residuals, detaching agents (for example cleaning of the moulds) in the casting houses, in the rubber and plastic industry as well as in the food industry

- different kinds of dirt or carbon waste (such as cleaning of air conveyers and oven nets on).

ADVANTAGES OF THE CRYOGENIC SHOTBLASTING SYSTEMS

Not polluting

- less waste than any other traditional system: only the residuals removed by the matrix and looking as solids are to be disposed of. No waste is produced from the CO2 pellets, that can be dangerous either to the health or to the environment
- the pellets sublime into the atmosphere as gaseous carbon dioxide, which is a natural component of the air and which therefore doesn't give any side effect, if the basic prevention and safety measures are kept.

"Soft" treatment of the surfaces

On MOHS' scale the dry ice pellets are 2 hard. The soft materials such as, aluminium alloys with poor hardness or those materials consisting of an epoxy, polyurethan or polyester base, either strengthened with fibres or not, can be treated without any damage to the surface.

Lower costs

- the effect of the thermal shock on the hot surfaces reduces the time of treatment, therefore increasing the productivity
- the pellets sublime into the atmosphere: the costs and the problems related to the disposal or to the recycle the agents used for the treatment are therefore eliminated
- only the slags of the removed material have to be disposed of.

Increased productivity

- either used manually or installed and assembled in wholly automated production lines they are really effective working aboard, even on very hot surfaces, since they eliminate the idle time of the plant, which is normally required to disassemble the moulds or to remove the parts to clean.
The stop is much shorter, sparing money on manpower or on further extra costs.

Longer life of the treated surfaces

- compared to the traditional shotblasting systems, since carbonic ice is a weak means of cohesion, the pellets shatter against the surface without causing any abrasion or wear of the treated surfaces, of the plants and of their components
- they enable the paint removing and/or cleaning of the surfaces to treat for an unlimited number of times, or at shorter periods of time, making their life longer.