



Advanced Optimization

- F6 -

In addition to "classic" optimization included in F1, this module provides "advance cuts" and "deferred optimization" over time with a launch in the factory.

Deferred Optimization

If you use "classic" optimization, CHACAL XXI produces documents for volumes to be cut (or a file for the cutting machine) at the same time it prints other documents to be used for manufacturing. The offices print these documents sometime before manufacturing *per se*.

In order to ensure more advanced use of optimization, in particular the use of parts of a retrievable length, the "Advanced Optimization" module allows for optimization to be deferred: it will be launched on a computer installed in the factory close to the cutting station.

When manufacturing is launched (in the offices), CHACAL XXI knows that for a given cutting machine, optimization will be effected at the level of the factory (therefore deferred in relation to manufacturing).

Cut documents are not printed for this machine.

However, a file that contains all the reference parts to be optimized is prepared by lot:

In the factory, close to the cutting machine, is a network computer that therefore has access to CHACAL XXI. The operator accesses a screen that has all the lots waiting for optimization. Planned quantities (on the basis of the pre-optimization requested at the time of the launch in the offices) may be displayed for each lot.

The operator selects the lot he wants to launch. The order of the launching of lots is decided by the user and often dictated in light of manufacturing and schedule restrictions.

He may select the quality of the optimization (inversely proportional to the speed ...) and indicate whether:

- He wants to store the retrievable parts
- He wants to use retrievable parts from a prior optimization.

The optimization is launched and the results are displayed.

The results appear on the screen.

The manager of the cutting process may then 'accept', 'refuse' or 'print' the optimized solution.

If the solution is accepted, the status of the lot is updated and it disappears from the list of lots.

In the opposite scenario, the optimization results are refused and a second attempt may be tried.

Advance Cut

When a lot is optimized, if CHACALXXI generates a retrievable part and if "advance cut" has been selected for this cutting machine, it will immediately look to see whether the part may be used by other lots the user has filled in. If this is the case, the piece is then "cut in advance" (in other words, an "advance cut") and identified as such (specific label with the name of the lot to which the part belongs).

What does *retrievable part* mean? It is a piece that remains from the end of the section, the length of which is such that you believe it may be retrievable to manufacture a frame in the future. The length may be parameterized.

Managing "advance cuts" requires the use of "deferred optimization, as it is in the production workshop that the decision on the exact order of lots will be determined.

It is *crucial* to be aware of the order to implement "advance sections"!