



YOUR ADVANTAGES

- Cost Savings for Revisions and Maintenance
- Shorter Revisions
- Higher Availability of the Plant
- Increased Occupational Safety
- Improved Combustion Conditions

COST OPTIMISATION THANKS TO THE FLEXI LONG LIFE GRATE BLOCK SYSTEM

(One patent issued and further patent pending)

A grate revision is usually very time consuming and expensive. Through the extensive experience of the I.C.E. AG in this field, the idea for an improved grate system emerged. This new system should fulfil the following criteria:

- Reduced Repair and Maintenance Expenses
- Shorter Revision Times
- Longer Lifetime of Grate Blocks
- Increased Occupational Safety
- Improved Combustion Conditions

These requirements are fully met by the new **Flexi Long Life (FLL)** grate block system!

The new grate block consists of an air-cooled frame, on which a head piece is mounted with two wedges. The head piece is installed in the area where the main wear occurs and can be easily and quickly replaced without lifting the grate rows above. All parts are made of the same material as the R-grate blocks and allow an even longer lifetime thanks to optimised cooling. During the replacement of the head pieces, the grate remains accessible and further work on cladding, feeder etc. can be carried out. There is no safety risk of falling through the bars of the grate's support structure. The "teardrop"-shaped design of the air nozzles allows a very smooth combustion and the risk of clogging of the nozzles decreases.

Flexi Long Life Grate Block System

Only replace what is needed!

On a R-grate most often only individual grate blocks wear out. Since the effort for the removal and re-installation of those are large, for grate rows in the middle, the row above must also

be lifted, the entire row is usually replaced. With the FLL grate block system, only the worn-out head pieces need to be replaced, which saves time and money and conserves resources.

Simple modification to FLL grate block system w/o risk

The modification from an existing system to FLL is rather simple; four R-grate blocks are replaced by one FLL grate block, which fits exactly to the grate support structure. The practical screw fittings of the FLL grate blocks

eliminate the tedious adjustment of the drawbars. If, contrary to expectations, the plant operator wishes to switch back to the R-grate blocks, then it is easy possible.

Successfully operated since 2017, test blocks since 2015

The first test series with the new FLL grate block system began in 2014 at MHKW Ulm and in 2015 at KEBAG Zuchwil. After the experiences made there, the FLL grate block was again optimised and, since 2017, it is in operation in its present form at MHKW Ulm. Due to the superb experience with

the FLL grate block system, all the grate's major combustion zones 1, 2 and 3 were converted to the FLL-System in 2019. Also, in 2019, KEBAG Zuchwil ordered new FLL grate blocks for their incinerator unit 1, on which the original test blocks from 2015 are still in operation.

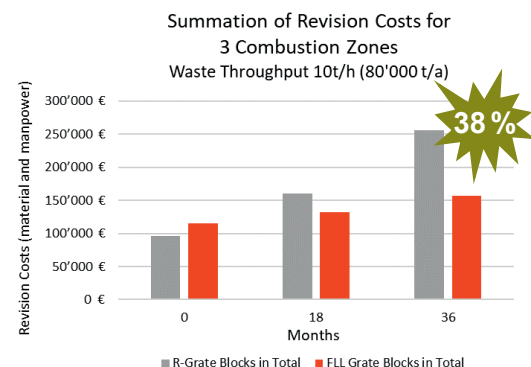
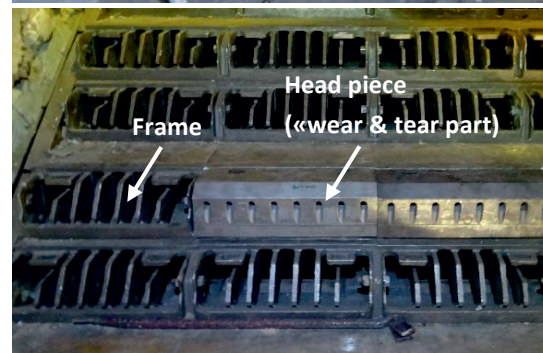
38 % savings on revisions over 3 years

The investment and operating costs for a 10 t/h -unit (80,000 t/a) waste throughput show, that about 38 % of the revision costs (material and manpower) can be saved over a 3 year-period, corresponding to savings of approx. 110'000 EUR. Furthermore, only 80 % of the regular revision time is needed for the FLL-main-revision and only 30 % for the small revision respectively, creating additional savings.

Because of the time saved the plant availability increases which in turn yields additional profits.

Since every plant and its revision concepts are different, we gladly calculate your potential savings for you!

We are at your service!



CONTACT

I.C.E. AG

Environmental Engineering
Hubstrasse 64
P. O. Box 547
CH-9501 Wil

Phone +41 (0)71 914 80 20

Fax +41 (0)71 914 80 21

info@iceag.com

www.iceag.com