

Section straightener



Bar straightening and polishing machine



Billet grinding machine



Abrasive Cut-off Machine

Vascas TR-2/1250 model abrasive cut-off machine for hot cutting at the end of a rolling mill



Vascas TR-1 abrasive cut-off machine in a cold finishing line



Vascas TR-2/1000 model abrasive cutting machine at the exit of a cooling bed



Detail of a Vascas TR-1/1000 model abrasive cut-off machine

Presentation

Vascas, a manufacturer with a long tradition of manufacturing equipment for the rolling and iron and steel industries, offers a range of abrasive cut-off machines with the most advanced of current technology.

The cutting process

Abrasive cutting can be carried out in any phase of the production process, regardless of the material's temperature and, therefore its main use, without ruling out other purposes, is in steel works and long rolled products.

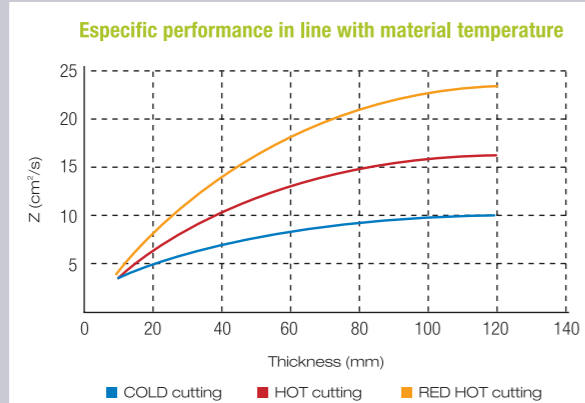
Main advantages of the abrasive cutting are:

- A** - A very rapid cutting compared with classic sawing machines regardless the quality of the steel.
- B** - Generally no need of a further deburring operation.

Working temperatures range from room temperature to 1100° C, wich can be split into three scales:

- Cold cutting in the range from room temperature to 100° C.
- Hot cutting covering the range from 100° C to 600° C.
- Red hot cutting ranging from 600° C to 1100° C.

The higher the temperature, the more the cutting time is reduced, wich makes the process most advisable in the area of the cooling bed exit (or within the cooling bed itself).



Vascas abrasive cut-off machine's main features:

- Savings of time in cutting cycles by minimising downtimes due to a combination of measurement using photocells and laser gauges.
- The cut is produced with almost no vibrations, due to the stability of the machine's construction resulting in a longer life of the cutting wheel with a reduced noise level
- Displacement of the cutting head for the transversal cut is an easy to maintain and mechanically efficient system.
- The fastening system of material to cut. The system of Vascas prevents the friction on the material's sides, which ensures a good quality cut.
- Quick clamping and unclamping of the disk thanks to a special locking bolt with pre calibrated torque limiter.
- The sparks treatment prevents the adherence of sparks which are produced when cutting at very high temperatures.

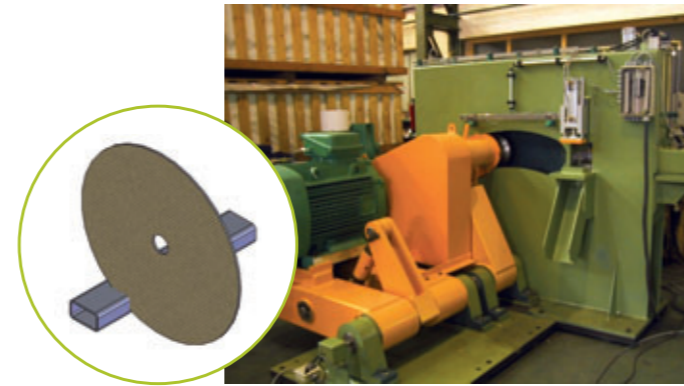


Abrasive cut-off machine types:

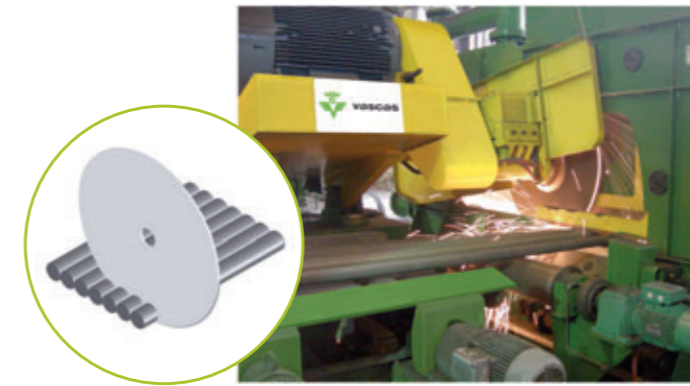
There are different types of abrasive cutting machines, depending on working temperature, diameter of the abrasive disk, the process where the machine is located, width of the layers, etc.

Some of them are, for example:

- **Vascas model TR-1** abrasive cut-off machine: Pendulum type chop stroke abrasive cut-off machine.



- **Vascas model TR-2** abrasive cut-off machine: Traverse type abrasive cut-off machine.



Transmission systems

The VASCAS abrasive cut-off machines use two types of transmissions:

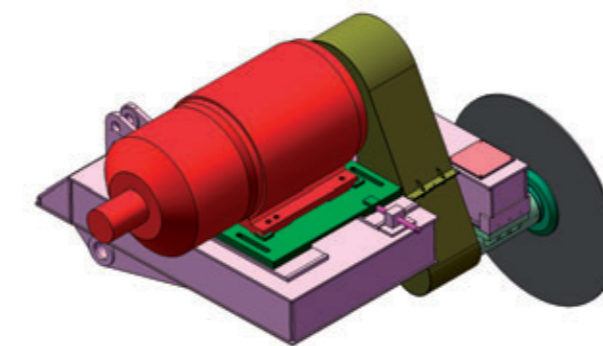
- 1- Belt transmission system: Via standard vee-belts.
- 2- Gearbox transmission system.

In machines up to 1250 mm. cutting disc diameter and start up power of up to 315 kW, it is possible to use either of the two solutions. From the above limits, the transmission is only used by means of the gear box.

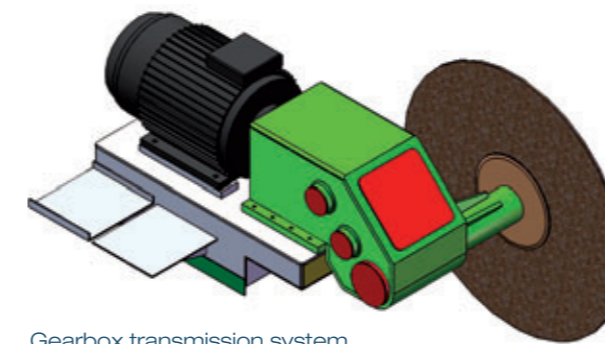
The use of belts is recommended when some investment and reduced maintenance costs are desired.

Furthermore, the noise level is slightly lower than to that of the gear box. The transmission via belts provides a degree of protection against cutting disc blockages, allowing movement of the belts.

The transmission via the gear box, a start up greater than 315 kW power is necessary. This box entails higher investment costs and a stricter compliance of the maintenance guidelines, although these guidelines are simple, their non-compliance may lead to costly breakdowns. Unlike the belts, in this case there is no movement against the disc blockages.



Belt transmission system



Gearbox transmission system

Complementary equipment



Our scope of supply includes all type of taylor made solutions in order to optimize operation and material transport processes, designing and supplying complete turn key projects, including:

- Cut to length stop.
- Entry and exit roller tables.
- Dust extractor.
- Others.

