

INDIGO NEWS

by MASTER

presentation of:

INDIGOROPE “GENIUS/C” (pat.) New machine for denim ecological dyeing

The indigo warp rope dyeing system for denim fabric is considered to be the most classic processing method and it still represents the world most used method.

This method has been widely used for over a hundred years but has never been subject to substantial technical changes, neither functional nor architectural.

For two customers that are among the most qualified world denim producers, we have built our first rope dyeing machines. These machines are to be clearly distinguished from the classical ones and this not only because they are totally automated and monitored, but also because they present a series of technical changes which had been previously tested on our INDIGOFLOW, the most complete and versatile slasher machine still unrivalled.

In particular the technical upgrades were: the introduction of the front-to-front circulating bath, the strengthening of its recycles per hour, the use of squeezing pads with equipressure rolls, the radical reduction of the oxidiser laps length with the use of big diameters rollers, the positioning on the ground of all the colour kitchen tanks, the completion of the rollers driers with side guards and suction hoods so to keep healthy the working environment, the addition of a series of safety devices for the operators, the supply of the machines and colour kitchens already complete with all the stainless steel hydraulic plant design, the addition of a third upper gangway to guarantee the necessary ergonomics for intervention in case of cleaning and maintenance.

Besides all what has been previously described, today we are able to transfer on our INDIGOROPE **and even on the already existing Ropedyeing** the new ecological and economical advanced technology of indigo and sulphur dyestuff dyeing. This kind of dyeing has been widely tested on our dyeing slasher machines, particularly the INDIGOGENIUS which represents today the most advanced machine in the world.

This ingenious technology, ecological and economical, allows to reduce by the half the dyeing vats number which are substituted by as many **GENIUS/C** (pat.) modules.

GENIUS/C (pat.) is an integrated dyeing module made up of a combination of a dyeing vat with a special group of dyestuff diffusion/fixation at soluble condition (leuco) in the yarn adjustable through heat activation and timing variation in inert environment.

Thanks to the **GENIUS/C** (pat.) modules the indigo and sulphur dyestuffs continuous dyeing technology plays an important role: high technology, ecology and economical as a result.

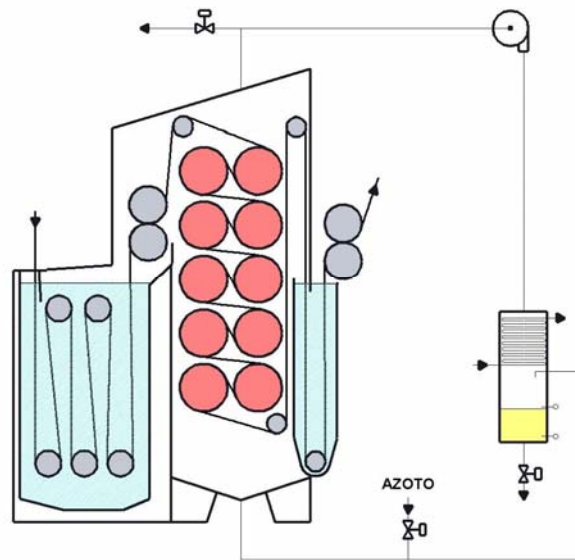
The technical ecological and economical advantages are:

- Dyeing process independent from external factors
- Better indigo and sulphur dyestuffs penetration, diffusion and fixing to the fibre
- Higher dyeing output (with sulphur dyestuffs, about 40%)
- Use of just four or more dyeing vats
- Dyeing baths volume reduction
- Reduction (about -50%) of soda and hydrosulphite consumption
- Reduction of the washing water consumption
- No nitrogen consumption when the machine is running
- Drastic sulphites and sulphates reduction in the sewing waters
- Operative flexibility increase for the possibility to operate with indigo at high concentration and even at high temperature, and that is “green dyeing” for the denim of the future.

In the **GENIUS/C** (pat.) modules the indigo chemical reduction is really total and perfect: the dyeing leuco ability makes us think of a particular particles disintegration at nanometric level, which puts the dyeing bath in condition to penetrate and fix itself onto the fibre in a superior way if compared to the traditional system. In some cases this also allows to eliminate the fixing agent even though there is a higher concentration of dyestuff in the bath, meaning that the dyeing quality is therefore better.

Moreover during the dyeing process of sulphur dyestuffs, the sulphur black in particular, we can see a better colour output which can be visually evaluated at around 40% with a obviously higher fixing grade if compared to the dyeing process performed by traditional machines.

Basically if compared to the classical indigo dyeing method, common to all traditional machines and which foresees three operating steps repeated several times (consisting in: yarn soaking with dyestuff, squeezing to eliminate the bath excess contained into the yarn itself and leuco oxidation by yarn staying at air) **GENIUS/C** added a fourth operating step and that is the hot leuco diffusion/fixation for a long timing in inert environment where yarn immersion and yarn squeezing take place as well.



“GENIUS/C” INTEGRATED MODULE FOR INERT ENVIRONMENT DYEING (Pat.)

Therefore is born the new **INDIGOROPE "GENIUS/C"** (pat.) a machine that besides the traditional dyeing process does also allow other special dyeing methods that can be achieved in an exclusive way thanks to the possibility to combine in different ways the physical/chemical characteristics of the dyeing bath with the mechanical/technical versatility the machine can provide. This interaction is very important and can lead to such results as the achievement of dyeing with particular effects to launch new products that are original and cannot be created with traditional machines.

Therefore the new **INDIGOROPE "GENIUS/C"** (pat.) not only represents the right answer to an always changing trend, but also to the problems of ecology and environment, and that is towards the “green” products. This machine does also represent the right solution to realize these products at considerably inferior prices than the current ones.

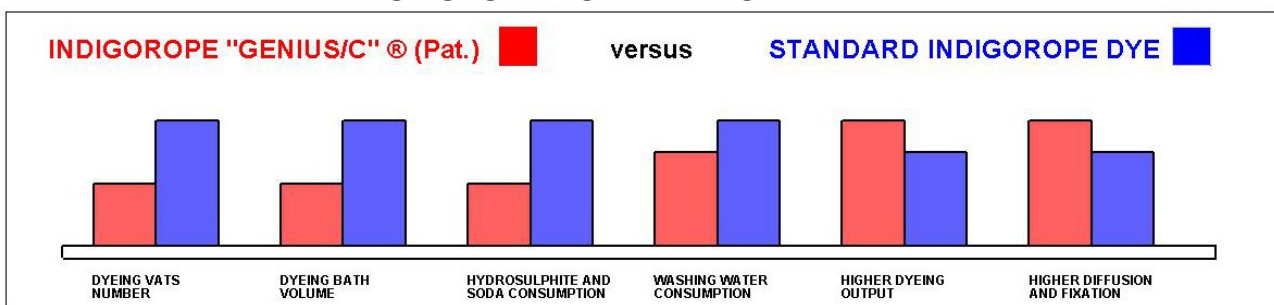
In order to ride over the current global recession and its consequent slowing down of consumptions that influenced the productive process of textiles and clothing in the whole world, not only do we need to have good company performances, but also new ideas and good innovation skills and we need to be ready to accept the changes as well.

On our side we can say that our 50 years of working experience taught us to never slow down and for this reason our projects, that are based on continuous research and development, represent without risk the right answer to the market requirements.

It is just by putting into effect the skills to create new products and to constantly update the productive process that we can face the markets in a competitive way.

INDIGOROPE "GENIUS/C" (pat.) is already the dyeing machine for the ecological denim of the future and without innovation there is no future

INDIGOROPE "GENIUS/C" ADDS FUTURE TO TRADITION



INDIGOROPE



PREPARATION AND BOTTOMING GROUP

Our old production machines:

INDIGOFLOW
Means maximum flexibility

INDIGOGENIUS
New advanced and ecological
indigo dyeing technology

INDIGOROPE
Innovators by tradition

And the new one:

INDIGOROPE "GENIUS / C"
New advanced and ecological indigo dyeing technology
Tradition and Future

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