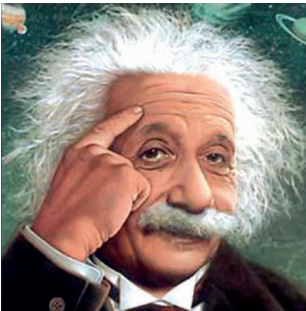


**IMPORTANT  
NOVELTIES**

# INDIGO NEWS

by MASTER

## THE BENEFICIAL EFFECTS OF THE CRISIS



Famous German physicist and philosopher Albert Einstein, Nobel Prize winner, to whom, among much else, we owe the formulation of the “theory of relativity”, about industrial crisis, by now cyclical, wrote:

“Do not pretend that things will change if we always do the same. The crisis is the best blessing that can happen to people and countries, because the crisis brings progress. Creativity is born from the distress, as the day is born from the dark night.

It is in crisis that invention, discovery and large strategies are born. Who ever overcomes crisis, outdoes himself without being overcome.

Who attributes their failures to the crisis and neglects, violent his own talent and gives most respect to the problems rather than solutions.

The real crisis is the crisis of incompetence.

The drawback of people and countries is laziness to find solutions to their problems.....”

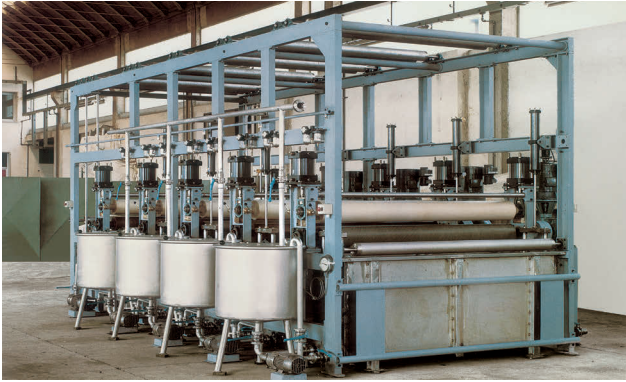
He then continues to exalt the bright side of crisis, proposing solutions and advantages for whom, by using genius and good will, tries to overcome it.

## WHAT WE HAVE DONE

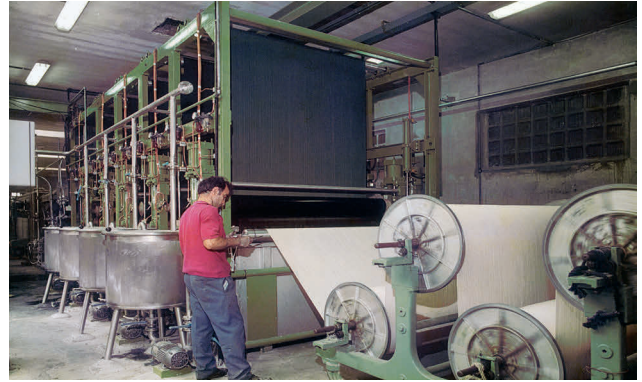
Even for us, that we have into our DNA the research and experimentation gene, this latest long crisis has been a spur to critically rethink over our machinery, not only for further improving the performance, but above all for reducing the price, the operational wasting and the energetic consumptions.

About this, we have been helped by our uncommon experience and by the fact, among much else, that we are the only manufacturer in the world which:

- for over 50 years has been manufacturing only dyeing machines for yarn, sector in which boasts several international Patents. (Our competitors instead are manufacturers, which are specialized about creels, warping machines, sizing machines, etc..., but not in dyeing machines, that they manufacture only as completion of their machinery).
- On 1972, manufactured Europe’s first indigo slasher dyeing machine, with vats that were equipped with pneumatic systems for uplifting the immersed rollers. This system has been abandoned in favor of the actual one, less bulky but much more rational and ergonomic.

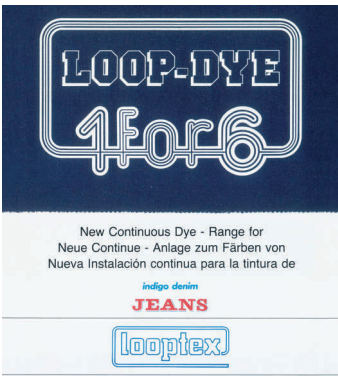


UNDER CONSTRUCTION

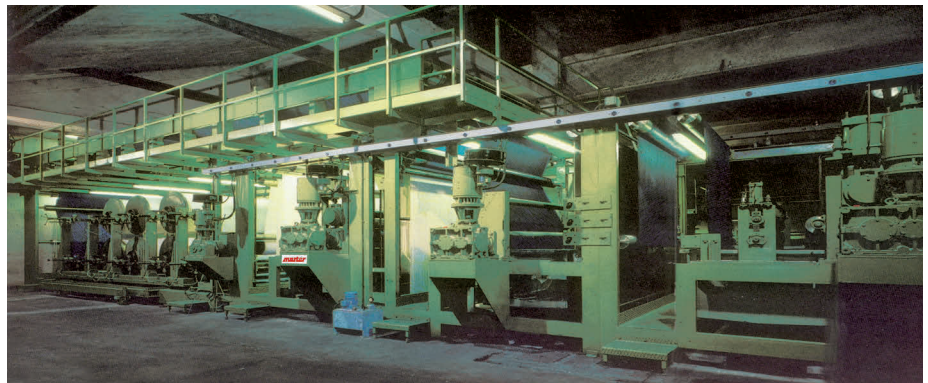


PIERO SILCI (I)

- On 1980, manufactured and commercialized through Looptex company the world's first dyeing machine, Loop model, on the basis of the idea that has been first patented and then abandoned by Mr. Chor Sen Lau (HK).



LOOPTEX LEAFLET



ITALDENIM (I)

- On 1991, patented the "Rapidsky®" oxidation intensifiers.
- On 1993, patented the "Twinflow®" vats, for the dyeing at full capacity with indigo and at reduced capacity with other dyestuffs.
- On 1993, manufactured the first machine for the dyeing of two overlapped warp chains, model LT/2000 (Legler Patent), with "Warp Link" and the insertion of a back gray for the total elimination of wastages during the lot change.  
(This technology had got no follow due to several operative problems).



GTO LEGLER (I)



GTO LEGLER (I)

- On 1995, patented “Rapidwash®” vats, to enhance washing with water saving
- On 2005, manufactured the first two machines for the rope dyeing, mod. **INDIGOROPE®** that were ergonomic and fully automatic and computerized – to tradition has been added modernity.



LEGLER MAROC (MA)



SETTAVEX (MA)

- On 2004/2006, patented two versions of the modules, **GENIUS®** revolutionary system for dyeing, in inert environment, with indigo and sulphur dyestuffs, that gives exceptional dyeing, economic and ecological results. THE DYEING SYSTEM OF THE FUTURE.



CANDIANI DENIM (I)

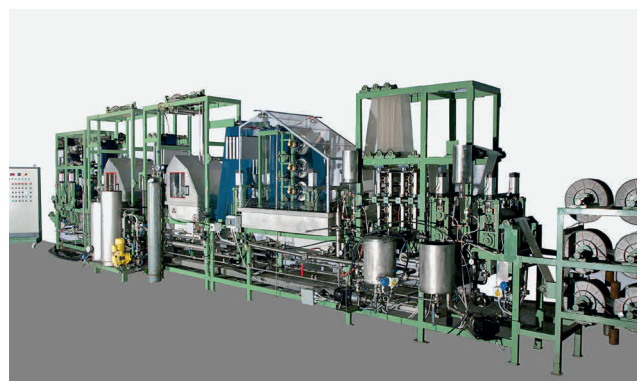


COVOLAN IND. TEXT. (BR)

- Since decades has got a dyeing machine of laboratory, constantly upgraded, on which tests and experimentation have been done continuously.



FIRST VERSION



CURRENT VERSION

## ACHIEVED RESULTS

Thanks to our particular experience and to continuous research, the aims we set ourselves have been largely achieved.

It is exactly consequently to the crisis, like never before, that in such a short time it has been possible to produce improving and upgrading to the current machinery and to present new Patents, etc.

Following, for each type of manufactured machine, we highlight the improvements and additions to their peculiar characteristics, which already differentiate our machines from the competitors' machines.

### **INDIGOFLOW®**

- + stainless steel monobloc vats
- + "Deepsky®" (Pat.) oxidation intensifiers
- + "Ecoturbowash®" (Pat.) washing intensifiers

with:

- better dyeing yield
- reduction of the production costs
- even less maintenance
- reduction of the machine costs

### **INDIGOROPE®**

- + "Ecoturbodye®" (Pat.) dyeing intensifiers
- + "Ecoturbowash®" (Pat.) washing intensifiers

with:

- better dyeing yield
- reduction of the production costs

### **INDIGOGENIUS®**

- + "Deepsky®" (Pat.) oxidation intensifiers
- + "Ecoturbowash®" (Pat.) washing intensifiers

with:

- better dyeing yield
- more reduction of the production costs

**These and other ingenious novelties, protected by international Patents, are intended for dyeing technology of the future.**

### **DEEPSKY® (Pat.)**

Are the new oxidation intensifiers, evolution of the previous Rapidsky® (Pat.), compared to which, thanks to a different constructive concept that is as ingenious as it is simple, with the doubling of the contact surface between air/yarn, used with greater prevalence, can give deeper oxidation, with the advantage to have a lower discharge of indigo from the yarn into the dyeing bath between one dyeing vat and the other, to the advantage of a higher dyeing yield. with:

- deeper oxidation
- higher dyeing yield
- remarkable reduction of cost

### **ECOTURBOWASH® (Pat.)**

Into the continuous dyeing machines, both slasher and rope, the washing vats before and after dyeing can be equipped with this new washing intensifier device, for sure the most intelligent and efficient means for washing.

These particular rollers with tubular structure with inside a turbodynamic rotor, autonomously, in a simple way, create turbulences conveyed to the whole front of the yarn, which multiply the washing effect, halving the water consumption. These are the answer to the pressing necessity for saving the precious good by now as the water is, a way to economize it, thinking to the future.

To the ecological and economic advantages it should be added the one to obtain a cleaner yarn and consequently a fabric better predisposed to the wet finishing operations, with increase of the qualitative performance. with:

- multiplication of the washing effect
- halving the water consumption
- reduction of production costs

### **ECOTURBODYE® (Pat.)**

It is the twin version of the ECOTURBOWASH® (Pat.) to which shares the hydrodynamic phenomenon that inspired them.

This is still more accentuated into the dyeing vats of the rope machine, due to their big capacity and moreover the high length of the immersed yarn laps.

Hence the idea to use them in replacement of the classic three lower rollers into these dyeing vats, in order to create turbulences conveyed to the whole front of the yarn, to favour a greater exchange with the dyeing bath. with:

- improvement of the dyeing yield

### **ECOSKY® (Pat.)**

Are modular and autonomous groups, **EcoFlow®** model placed to ground floor into the machine, for the oxidation of the dyed yarn, its characteristic is the possibility to vary the drawing-in yarn capacity, accordingly to necessity.

Moreover, this characteristic allows, in automatic, during the operations at the end of the dyeing process and at the beginning of the new lot, for two times, to empty itself, allowing to recover 65% of the drawing-in yarn. with:

- more operative flexibility
- remarkable saving of yarn during the lot change
- reduction of the production costs

## **ECOFLOW**<sup>®</sup> (Pat.)

It is the evolution of our unmatched “INDIGOFLOW”, from which it keeps all the peculiar characteristics, differentiating itself only for a slight higher length and for being modular structure totally ground floor fitted, i.e. without the upper frame and the pertinent walkways, access ladder, etc.

This simplified machine, not only allows a remarkable reduction of its cost, but being equipped with innovative ECOSKY<sup>®</sup> oxidators (saving of yarn at lot change) and with ECOTURBOWASH<sup>®</sup> washing intensifiers (saving of washing water), it results to be, in its kind, the less expensive machine and more economical and ecological in its management. with:

- remarkable saving of yarn during the lot change
- halving of water consumption
- reduction of the production costs
- remarkable reduction of machine cost

*and* **WOW !!!**

**at long last**



## **EUREKA**<sup>®</sup> (Pat.)

A new technological achievement, a new point of reference in terms of versatility and performance, the fantastic possibility to dye both traditionally in air and in inert environment under Nitrogen, a solution that has been waited for long and has been realized only thanks to an invisible component: our ultra-fifty years' experience.

**EUREKA**<sup>®</sup> is the evolution of our special dyeing technology in inert environment, with **GENIUS**<sup>®</sup> (Pat.) modules, of which maintains the peculiar characteristics and the pertinent qualitative, economical and ecological advantages, to which however, in a simple way, it has been added also the versatility and the qualities of our unsurpassed **INDIGOFLOW**<sup>®</sup>.

Practically, it is a multifunctional module for the continuous dyeing, slasher or rope system, with indigo and sulphur dyestuffs, which depending on the necessity can work, whether

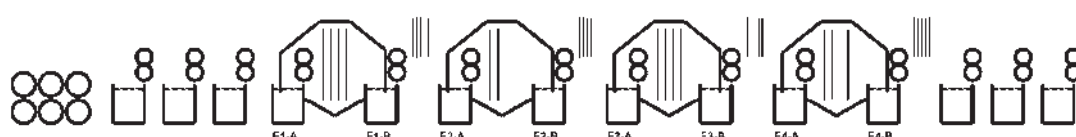
in air or under Nitrogen, exploiting in this way the union of the two different operative technologies, for producing a very wide range of articles, even exclusives.

**EUREKA®**, is a unique system, the most important concentration of Know-How in the sector, but incredibly simple and rational.

The mastery of all the indigo dyeing technologies, also allows us to combine them with each other, expanding and optimizing the single processes and performances.

**EUREKA®** multifunctional modules, therefore can be used, accordingly to different necessities, very intelligently, in several ways, as per following exemplifying schemes of comparison:

### 1) Four **EUREKA®** multifunctional modules, in line



with:

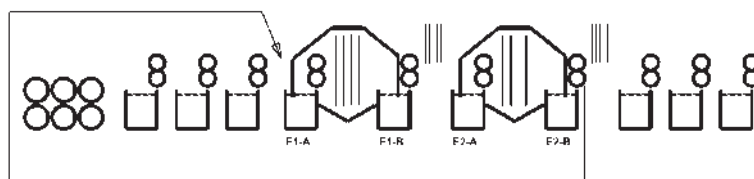
- possibility of N. 8 traditional dyeings with indigo, in air
- possibility of N. 4 and/or n° 8 dyeings with indigo, under Nitrogen, with:
  - \* dyeing process independent from external variables
  - \* better diffusion and fixation of the indigo and sulphur dyestuffs to the fiber
  - \* higher dyeing yield and better brilliance
  - \* reduction (up to about -80%) of the soda and hydrosulfite consumption
  - \* reduction in the consumption of washing water
  - \* reduction of the production costs
  - \* no Nitrogen consumption, in operation (twin pad type)
  - \* remarkable lowering of sulfites and sulfates in waste water
  - \* improvement of the environmental working conditions
  - \* increase in the operational flexibility thanks to the possibility of working with concentrated baths and at high temperature too

### 2) Two **EUREKA®** multifunctional modules, with “**TWICE SYSTEM®**”

This system is the evolution of the “Loop” dyeing system, developed by us on 1980, from which it differs by the fact to use only one loop for a plurality of vats and not a plurality of loops for only one vat.

In practice, “**TWICE SYSTEM®**” has eliminated the defects of the old “Loop” system, keeping only the advantages.

(It is adoptable even for the **EcoFLOW®** due to its modular structure, ground floor fitted).

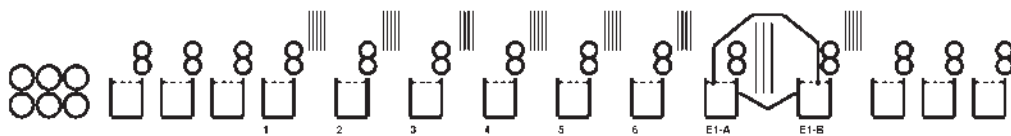


with:

- possibility of N. 8 traditional dyeings with indigo, in air

- possibility of N. 4 and/or N. 8 dyeings with indigo, under Nitrogen, besides the advantages at 1) par., also with:
  - \* halving of the number of **EUREKA**<sup>®</sup> modules
  - \* remarkable reduction of the volume of the dyeing baths
  - \* remarkable reduction of energy consumptions
  - \* more uniform squeezing due to the doubling of linear density of yarn, with elimination of center/selvedge differences
  - \* reduction of the length of the machine
  - \* remarkable reduction of the machine costs

3) One or more **EUREKA**<sup>®</sup> multifunctional module, to be inserted into traditional dyeing machines, both slasher and rope, (also existent), in replacement of the last two vats, usually used besides indigo also for the topping and sulphur black, or in other positions for indigo, color denim, etc.



To couple two different indigo dyeing technologies, the one in air with the one under Nitrogen (with one or more modules) is the most intelligent way and not so expensive to expand, diversify and renew the production range, moreover in an economical and ecological way.

with:

- possibility of N. 8 traditional dyeings with indigo, in air
- possibility of N. 2 (and/or more) dyeings with indigo, under Nitrogen (with the advantages at 1) par.
- possibility of topping and dyeing with sulphur dyestuffs, in air
- possibility of topping and dyeing with sulphur dyestuffs, under Nitrogen, with:
  - \* higher color yield
  - \* higher fixation degree to the fiber
  - \* better brilliance
  - \* possibility to produce new exclusive articles

In a global and very dynamic market, where the competition is strong, it is indispensable not only to maximize the machinery efficiency, but also the quality, flexibility and cheapness of production.

We work to provide technological solutions that put at the center of the productive process the reduction of energy, water and chemicals consumptions, for a more responsible production process, also for the safeguard of environment and health.

**EUREKA**<sup>®</sup> creates a technological and ecological turning point to avoid having to face tomorrow with yesterday's technology.

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