ARE YOU ICOFIXING?

ICOMATEX CHANGES THE WAY TO FINISH KNITS WITH ICOFIX

In the next **Singapore ITMA 2005**, **ICOMATEX** located in Barcelona (Spain), will show the last technical developments and innovations of textile dyeing & finishing. In the stand all customers could take a look the following machines: a Stenter Frame **IC10** with **AIRFLOW CONTROL**, a complete coating line **ICOSCREEN** and **the new tubular knitted heatseatting ICOFIX.**

Nowadays, the heatsetting process of the knitted fabrics is complicated and expensive for the following and main reasons:

- Inappropriate shrinkage after the dyeing process
- Crease marks on elastane and other fibers that are quite difficult and somtimes impossible to take away after dyeing.

HOW ARE COMPANIES WORKING NOW?

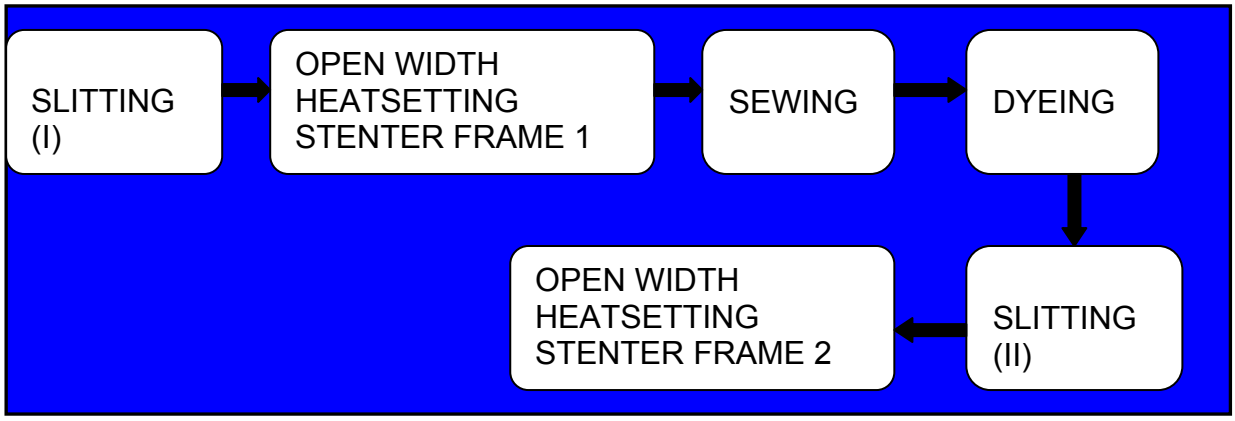


Fig 1.-Up to now the process is like this

The above mentioned process was not necessary some time a go, but due to the fact of the new fibers incoming, it has become essential nowadays and it is supposed to be a trouble for the manufacturer the following problems:

- High cost in investment machinery
- High energy consumption (powder, rate of flow, water, etc)
- Difficult fabric logistics (space, trolleys, etc)
- Big space full of machinery in the factory

The **ICOFIX** is an important choice to have in mind for heatsetting before dyeing process for fabrics that the manufacturer has to hand or to deliver in open width or tubular with the correct width, because the new process can achieve the following strong points :

- Calender step can be avoided and owing to this fact the marks on both sides of fabrics can be forgotten.
- Moreover the use of calendar doesn't guarantee any dimensional stability neither wide nor length of the fabric. ICOFIX does!!
- No sewing process of the fabric

HOW WILL COMPANIES WORK WITH ICOFIX?

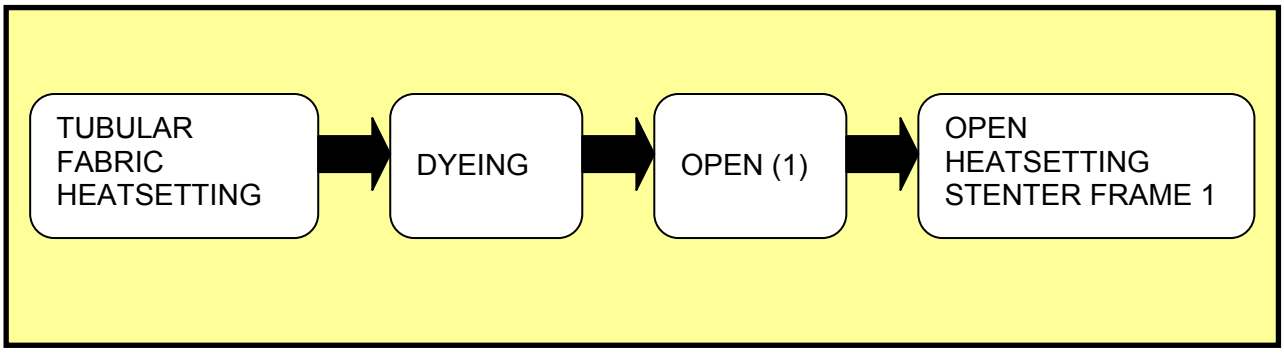
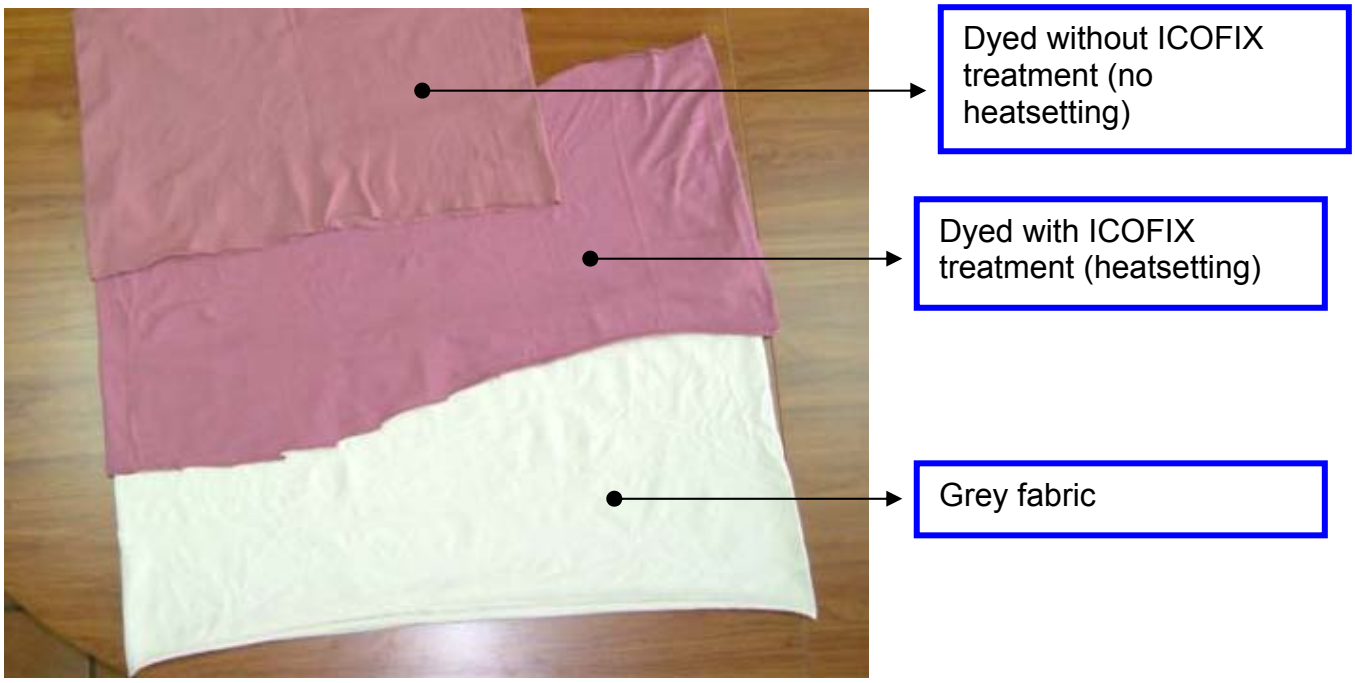


Fig 2.- The process with ICOFIX

The **ICOFIX** gives a solution for a big deal of common problems for the dyeing and finishing plants. This machine is supposed to put upside down the way to process tubular knits.

The **ICOFIX** process reach several savings such as:

- More free space in the factory
- Less fabric movement or transport, so better and more effective logistics process and distribution plant
- Less machinery investment because cheaper project.
- Less people needs
- Low energy consumption (electricity, gas, oil, steam, water,etc)
- Faster process, so lead-time improvement
- Less maintenance



The main technical parts of the **ICOFIX** are the following:

1)Pre-treatment system

High efficiency steamer specially designed for elastomer fabrics. This system can offer the following advantages:

- The elastomer fibbers become mobile and relaxed after steaming, so at this point we can stretch the fabric with more efficiency and ease.
- The creases can be erased or decreased.

2)Entry and guiding system

The entry system contains 2 feeding wheels covered by special rubber that take the fabric as the inside layer as the outside layer and fit the wide by uncurling and endless motorised cylinder.

At this point we find the more difficult and dangerous process: the guiding of the fabric. The new and developed guides take care of the fabric and do not allow marks during the process.

3)Heatsetting chamber

The heatsetting chamber has a gas or thermal oil heating system that can allow the manufacturer to reach more than 200 ºCelsius of temperature and also can allow the heatsetting of the synthetic fabrics.

The heat unit contains the following parts: a extraction module, burner module, combustion chamber with the air circuit, a filter that avoids the dust to get in touch with the heating source, and the temperature control electronic PID appliance.

4)Exit system

Unit exit system designed for:

- Cooling
- Plaiting
- Rolling

5)Control system

The control of the machine have the following stages:

- Temparature control with PID appliance(above explained, see point nº3)

- Steam control: a valve will be settled down in order to provide more or less steam quantity, depends on the specific properties of each fabric (% of moisture-humidity at the entrance, type of fabric, etc)

- Tension fabric control: machine will work with knitted elastic fabric, the tension control is going to be very important if we want to avoid later residual shrinkages. The system that can help us in this are encoded motors and controlled by speed inverters.

**EXAMPLE OF COST SAVINGS OR PRICING (the factory/mill need 2 machines)

1) Square meters savings:

Standard Process:	Opened fabric heatsetting:	235m^2
	Sewing:	24 m^2
	Open(1):	21 m^2

ICOFIX Process:	Tubular fabric heatsetting	46 m^2

As a result of this explanation we find out that it will have a space savings of 234 m^2 , and without giving value neither the dead spaces nor inner stocks.

2)Hand force savings:

In a factory with 3 shifts and 8 hour per shift.

Standard Process:	Opened fabric heatsetting:	7 workers
	Sewing:	3 workers
	Open(1):	3 workers

ICOFIX Process:	Tubular fabric heatsetting	3 workers

As a result ot this explanation we find out that it will have a saving of 10 workers.

3)Energy savings:

Standard Process:	Opened fabric heatsetting:	65kw/h-880.000kcal/hour
	Sewing:	7kw/hour
	Open(1):	9kw/hour

ICOFIX Process:	Tubular fabric heatsetting:	15kw/h-168.000kcal/hour

ARE YOU ICOFIXING NOW?

We hope to get your comments on this and we welcome you to try our machine with your fabrics in our factory.

For any enquiries please contact us :

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