

## **Operate metallic yarns on air- jet looms while reducing the number of the relay nozzle**

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### **Abstract:**

With the frequent use of metallic yarns as wefts for the production of furniture fabrics such as curtain fabrics and with the spread of the use of air – jet looms because of its enormous potential and advantages widespread belief in the difficulty of the air medium (compressed air) used in these machines to carry metallic yarns through the woven sea to complete the process of weft extrusion because of the lack of property and the weight of these wefts, therefore, to produce such types of fabrics on these machines Auxiliary and full use of the relay nozzles available in the machine to produce this type of fabric . which exposes these pieces to damage quickly to the many used in the wrong form where it happens to eat and blockage of these relay nozzles and parts attached to it. with the increase in the price of hard currency against the local currency to liberalize the exchange rate, there is an obstacle for textile factories in importing spare parts and the availability of special accessories for machines and the need for air – jet looms to replace some parts continuously due to the high consumption such as (relay nozzles and accessories), especially with pressures. High prices that lead to blockage and consumption quickly, which is in front of the factory to either import these parts at high prices, which increases the cost of operation or stop the machines from working because of the unavailability of these parts .

Therefore, in this research we have attempted to produce curtain fabrics with 9 samples based on metallic yarns as wefts on air – jet looms with the suspension of some relay nozzles available in the machine with the use of pressure (2.5 bar), which leads to the non-consumption of relay nozzles and accessories quickly, Reduces operating cost. One of the most important results reached was that the fabrics produced by the number of 30 relay nozzles have recorded the highest readings for each of the tensile strength in the direction of the weft - weight per square meter - of fabrics produced at 40 relay nozzles and finally 50 relay nozzles that have the same operational specifications we conclude Inverse relationship between number of relay nozzles and tensile strength readings in the direction of the weft - weight per square meter - for fabrics having the same operational specifications.

### **Key world:**

Air- jet looms, metallic yarns ,air pressure reduction.