HAUG Ionization

The HAUG Single-cable-technology

Ionization system for bobbin, bank and warp creels

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Ionization systems

HAUG

Ionization system for bobbin, bank and warp creels with the HAUG Single-Cable-Technology

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Elimination of electrostatic charges right on the bobbin creel!

Well-known manufacturerspayparticular attentiontothe furtherdevelopment of ionization systems for the textile industry. Since spinning involves the processing of individual yarns over long distances allowance must be made for the considerable differences compared to the processing of endless fabrics. Precisely for such needs a practical, special ionization device with the well-established HAUG-Single-Cable-Technology was developed which offerssignificant assembly advantages on the bobbin and warp creel.

The ambient conditions in the production rooms are unstable. Bothroom temperature and relativeairhumidity largely depend onthe overall climatic conditions.

Low air humidity, higher room temperatureandsynthetic materials are unfavourable conditions whichleadtoincreased electrostatic charges. The “internal condition“ on and in thebobbin is also determined bytheseinfluences.

The situationismorefavourable if, for example, conditioned material (from air-conditined storage) is being processed. But this is not usually the case. In addition, residual charges from the previous winding processare “preserved”inthebobbin,whichinturnleadstomore difficult processing conditions. These considerations applytotheexternalworking conditions when the machine is not in operation. But what about when the machine is running?

Photo1:TheHAUGSingle-Cable-Technology

Conditions when the machine is running

Working speed plays a majorparthere. It isgenerally $\leq$ 300 m/min but, asworking speed increases, so does the speed at which the yarnmovesawayfrom the bobbin. It will riseevenfaster as the bobbindiameter gets smaller. However, it is just this separation of the yarn from the fixed bobbin which determines electrostatic charges. And if synthetic materials orblended fabrics areprocessed, static electricity will increasebecauseofthereduced electrical conductivity of the material.

On the bobbin creel, the yarn runs through the guide eyesatgreatspeed. Forreasonsofwear,theseeyes are often made of a ceramic or other dielectric material. Eyes which are made of such materials often give riseto increased static electricitybecause of friction and subsequent separation through the deflection of the yarn behind the outlet. These influences will necessarilylead to disrupted production processes.

The electrostatically charged material attracts dust and sus-pended particles from the air, whichisaparticular disadvan-tage in the case of bright material. The presence of unipolar charges, i.e. electrostatic charges with the same sign (+) positive or (-) negative is revealed by mutual repulsion and attraction of the individual yarns in a yarn sheet. These cause the yarns to wave and an unsteady take-off which can often only be compensated by reduced working speed. However, increased yarn breakage is particularly disadvantageous.

Design of the HAUG Single-cable-technology

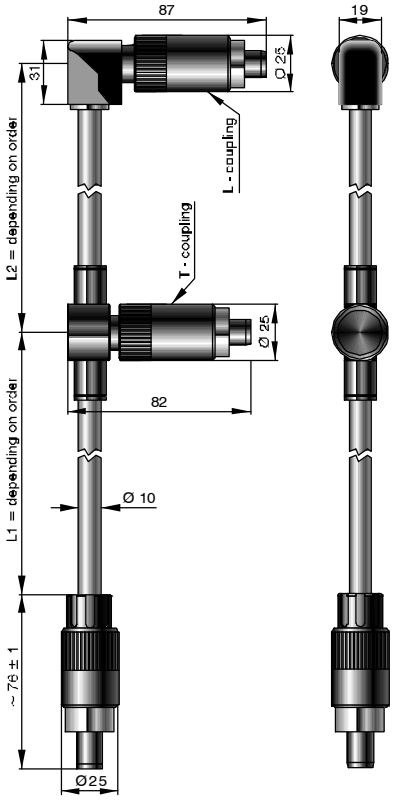
This special ionizationsystem for bobbin and warp creels uses a tubular holder as a carrier. This tube accommodates brackets for fastening theionizingbars and thepower pack can also be fitted to it. The ionizing bars are fitted and connected electrically via a special high-voltage cabel, type AT....L.

Withthisline, each ionizing barisconnectedelectrically and contacts the high-voltagepower pack attheend.The particular advantagelies in the combination of mechanical fastening and electrical connection. In the case of severallevels, only oneline each leads from the power pack. In addition, the adjustability of the height permits adjustment to millimetre precision. The best possible utilization of the generated ions for charge balancingisachieved when the ionizingbar/yarn sheet gap is optimal.

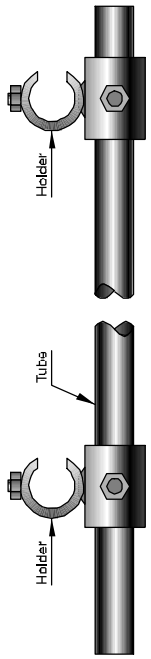
A further advantage isthearrangement of the special ionization system from the centre of the creel. This gives the operator generous handling room from outside. The system also offersadvantages in the fitting of the ionization device, in cleaning and in servicing.

Particular attention waspaidtosafetyconsiderations. All ionizing bars have absoluteprotection to CE standard. contacting is effected by means of theSystemX-2000. This gas-tight, coaxial high-voltage connection is unique and protected by international property rights.

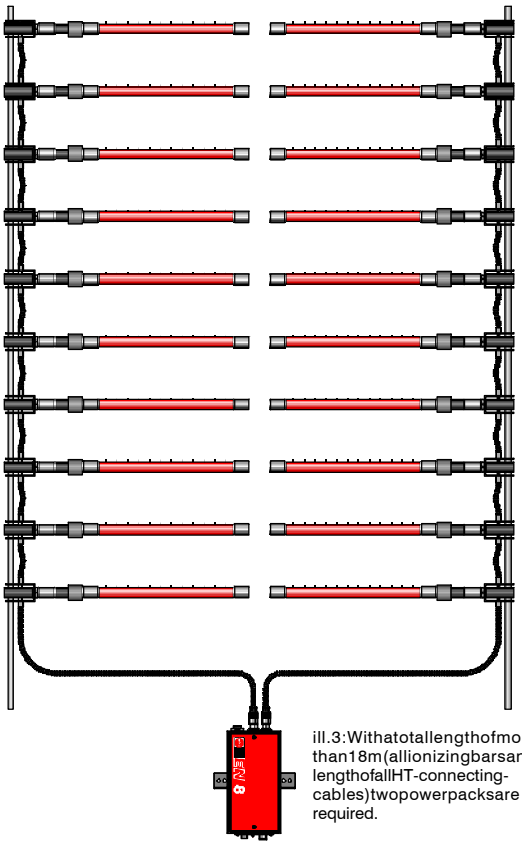
Photo2:Specialionizationsystemforbobbinandwarpcreels



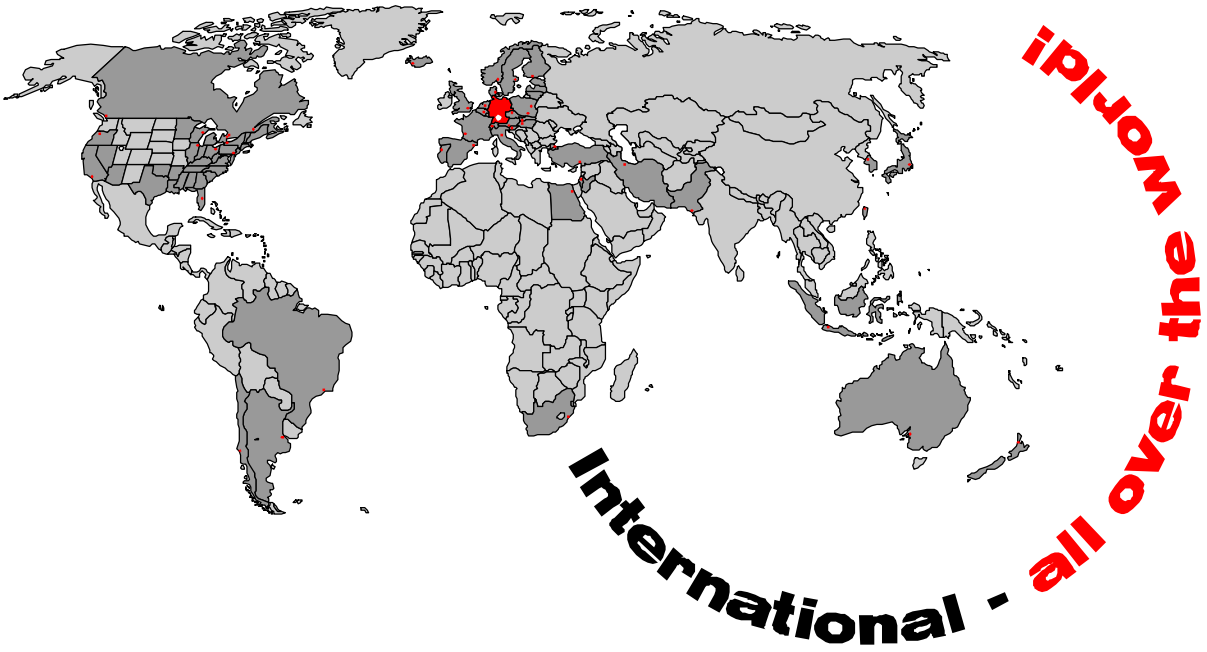
ill.1:Onecableconnectsseveralionizing barsatonce



ill.2:Tubularholders



ill.3:Withatotallengthofmore than18m(allionizingbarsand lengthofallHT-connecting-cables)twopowerpacksare required.



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