MACHINERY FOR SLAUGHTER

5PiGroup
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INTRODUCTION

The purpose of a slaughterhouse is producing meat hygienically prepared by human handling of animals in regard to the use of techniques for the hygienic slaughter of animals and preparation of canals with a strict division of operations "clean" and "dirty." And at the same time provide adequate inspection of meat and proper management of wastes resulting to remove any potential danger that infected meat may reach the public or contaminate the environment. These are some of our targets for this work:
1 CATTLE SLAUGHTER LINES.

1.1 VEAL GUILLOTINE DOOR.

ST37 steel construction hot dip galvanized, operated by a pneumatic cylinder. This equipment is intended to isolate and guaranteed supply to the slaughter box guillotine door is designed to not produce any injury to the animal when it is operated.
1.2 BOOSTER.
Machine designed to lift the animal to the carrier or the track.
1.3 INTRODUCER.
Dispensing system located at the entrance of the conveyor. It consists of a pneumatic system, which doses and enter cars on the conveyor, so as to place a car carrier for each thruster. Can be double rail or tubular.

1.4 CONVEYORS.
Machinery designed for air transport of animals automatically. These conveyors are manufactured using steel UPN F-111, getting a surface treatment after plating. The drive is made by direct transmission with planetary gear motor so that we can get the corresponding speed. The shafts are made of F-125 to ensure sufficient strength for use. All auxiliary transmission (crowns, caps, etc.) Are made of F-114. As the conveyor frame, all the elements made of carbon steel will carry a subsequent surface treatment of galvanized steel.
1.5 TRAY BLEEDING

With stainless steel tank designed to collect animal blood once the stabbing. The deposit has prepared a drain and an outlet for placing a bomb, so that blood can be transported to a storage tank for further processing.

The tank is ready to be received in civil engineering.
1.6 POWER CHAIN OF BLEEDING FIRST LEG AND SKINNED.

Machining conveyor start in bleeding into the area of transfer of bleeding hook hook dressing.

Bleeding hooks rail pass to return to the lung of hooks near the spout of bleeding.

This chain has a compensation device tuning and tire around the powertrain machining system consists of a pneumatic compensation system and a limit switch safety system also includes an adjustment to a valve. The compensation system always keeps the chain taut also working with a broken security system at a given time if there was a hitch in the chain. A final turn to safety immediately disconnects the equipment if it is proved excessive attachment system. The chain operation is automatic speed can be regulated the same with an electronic speed controller that regulates the slaughter as required.
1.7 AIR PLATFORMS.

Pneumatically powered lifting platform constructed entirely of stainless steel AISI 304 guided by two vertical columns each equipped with its own pneumatic cylinder.

The platform is equipped with safety rails for the feet and knees. Movements up / down are made through two pedal pull switches located at the bottom of the platform.
1.8 VEAL SKINNER.

Includes:

**AUXILIARY ELECTRIC SYSTEM FOR OPERATION**

**SUSPENSION SYSTEM CHANNEL**

The cattle skinning machine electro-hydraulic operation, aims to make the operation of skinning of cattle in a correct, thus obtaining a high return on the slaughter line leaving the channels with a perfect finish. The movement of the machine is up and down, to no contact between the outer surface of the skin of cattle to the very surface of the channels.

The machine is equipped with:

- Channel suspension system during operation of skinning, avoiding the deterioration of air carriages.
- Electrical device that facilitates the operation of skinning, and prevent it ruptured the muscles of the canals during the skinning operation.
**Structure**
ST 37 steel construction hot dip galvanized after fabrication and stainless steel AISI 304. Designed and built to withstand the demand. **Skinning curler** Made of stainless steel AISI 304. Equipped with two stainless steel chains. Movements upwards and downwards and rotation are carried out through an electro-hydraulic device.

**Platforms**
The two platforms included in the structure of the machine allows operators to control the lift platform to facilitate the skinning operation. Each platform consists of a sink with knife sterilizer. **Suspension Leg** The existence of a pneumatic suspension system of the animal's hind legs, avoid overloading the airway and greater stability in the canals during the skinning process.

**Increased Productivity**
Machining processes, as the perfect union of all the mechanisms that make this equipment allows a significant increase in productivity, this machine being increasingly essential in slaughter lines of high average capacity.
1.9 CONVEYOR RUMEN AND INTESTINES.

Synchronized conveyor for transport along the line of cattle slaughtered and the area of intestinal packages adopted / seized.

The conveyor is equipped with a PVC tape with tabs, the structure is in stainless steel, included a decontamination system of the tape.

The conveyor is equipped with a pneumatic system for debris removal from approved and confiscated.
1.10 CONVEYOR INTERNAL ORGANS.

The CARRIER FOR INSPECTION OF GUTS RED is designed to allow the transport of internal organs, this transport being synchronized with the movement of the channel, i.e., the movement of the string line acabdo and evisceration.

The carousel is gutted internal organs composed of 14 hooks that run vertically a closed circuit, with an automatic release system remains.

It also has a washing system (hot) and disinfection (hot water at 82 °C) of hooks. The transport speed of the hooks are regulated through an electronic speed gearmotor.

The TRANSPORT FOR INSPECTION OF GUTS RED is constructed of stainless steel AISI 304, in accordance with the health rules laid down by the EC. All mechanical components used in their manufacture are carefully selected according to applications verified.
1.11 FIXED PLATFORMS.

Working platform on two columns that can be used when one or more workers must perform their work at a fixed level.

The platform is made of stainless steel attached to stainless steel columns also through a device that allows you to adjust and set its height within certain limits, is equipped with stairs and railings around.

The floor of the platform is placed usually the same material that carries the slaughterhouse floor to give the feeling of being at the same level of work.

The platform is integrated into a facility where it is necessary to wash hands with sanitizer wash knives and aprons.

All water and other liquids are collected at the bottom of corrugated platform with a drain connected to sewer. This construction prevents water from leaking from the platform to the ground.
1.12 PLATFORM EVISCERATION.

Pneumatic Platform Evisceration is studied and designed for vertical and horizontal movements of the ground and tilting of Cuba receiving the viscera are conducted in an independent manner through the operation by the operator of seven air units properly synchronized, allowing the worker to perform each operation in a fast, safe and ergonomically correct, being essential for the evisceration of slaughter cattle in high-capacity media. Maximum height is sized individually for each situation.

Evisceration Pneumatic Platform is made of stainless steel AISI 304 and ST 37, soil covered with a layer of material non-slip characteristics of the food industry, in compliance with applicable EU directives.
2 LINE OF KILLING SHEEP-GOATS.

2.1 POST STUNNING.

The post-stunning, applies to pigs as a sheep / goat, and is intended to desensitize the animals with the application of an electric shock through the head.

 Manufactured according to the latest standards of animal welfare community, has visible indicators of voltage, current, electrical resistance and signal lamp of the application of electric shock.

2.2 SHEEP-GOATS SKINNER.

Lambs stripping machine made of stainless steel AISI 304. The legs, sides and back of the channel is pre skin and loose skin manually linking Skinner drum, the rotation is turning so the skin is torn off the carcass. To release the skin is turned upside down rotation of the drum and removed from the drum. Activation of the drum is made with pedal.
3 AIRWAYS.

3.1 WAY DOUBLE RAIL

Airway profile consists of extruded aluminum alloy 6063 with treatment of T-5 temper. Road section designed to allow the cars rolling over it transport while facilitating the installation of the necessary elements for fixing it.
3.2 TUBULAR WAY.

Built in DIN 2440 pipe diameter 2 “St 44.2 steel hot dip galvanized, zinc being deposited thickness of 126 microns. The subject media also built in bar ST 44.2 steel hot dip galvanized being the thickness of zinc deposit of 126 microns.
4  BOVINE DEBONING ROOM.

The cutting room was conceived in order to facilitate operations for deboning pieces of meat through sequential automation of various processes, from supply of parts to deboning to the final product.

Feeding the deboning pieces of meat come to the cutting table through a descender, which are cut by a saw cutting (cutting IM), after cutting the meat pieces to reach a distribution table that feeds the tables cutting, being removed by the operators, by the respective jobs (cutting side). Once parts are designed to cut up a swivel tee

The electronic speed controllers can regulate the speed of cutting tables, distribution and deboning as well as the speed of rotation of the tee, allowing in this way, varying the pace of cutting in accordance with the intended performance.

Unlike the secondary cutting, cutting is performed in horizontal primary, and it lifts used tires, which serve to lower the piece to the height of the operator as he is carrying out the plants.
5  CARRILERIA REFRIGERATION STORAGE.

Fresh meat shrinks, loses weight and is quickly attacked by bacteria from the air, hands and clothes clean as well as transportation. Since reproduction of bacteria increases with temperature and humidity, the risk is greater in the tropics, which is why, when there is no refrigeration, the meat is traditionally retailed within twelve hours after the killing even at the risk of losses due to shrinkage, waste and spoilage.

5.1 CHILLING REFRIGERATION STORAGE TRANSPORTER AND FROZEN ROOM

Carrier chilling refrigeration storage, was designed to carry the channels, from the weighing area - scale - through the House of Cold Shock from the storage area until you reach the other chains made mechanized ligation carcases to proper cold storage.

The Transporter Chamber and Food Oreo Chambers is composed of the structure and properly sized gantry itself according to the various requests, by air double rail itself, by the power unit designed in accordance with the burdens of the conveyor, and tabs also responsible for moving the cart path. This team also includes an offset adjustment device and driving tire cover, travel speed being controlled through an electronic inverter.

The Transporter Chamber and Food Oreo Chambers ST37 is made of steel and hot dip galvanized, ypor an anodized aluminum specially designed for this purpose, according to health and hygiene standards set by the EC.
WAY RAIL REFRIGERATION STORAGE

5.2 WAY DOUBLE RAIL
Airway profile consists of extruded aluminum alloy 6063 T5 tempering treatment. Road section designed to allow the cars rolling over it transport while facilitating the installation of the necessary elements for fixing it.

5.3 TUBULAR WAY
Built in DIN 2440 pipe diameter 2 "St 44.2 steel hot dip galvanized, zinc being deposited thickness of 126 microns. The subject media also built in bar ST 44.2 steel hot dip galvanized being the thickness of zinc deposit of 126 microns.
## 6 BLOOD AND TRIPE

<table>
<thead>
<tr>
<th>BLOOD COOKER</th>
<th>BLOOD MIXER</th>
<th>BARREL PNEUMATIC</th>
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<tbody>
<tr>
<td><img src="image1.png" alt="BLOOD COOKER" /></td>
<td><img src="image2.png" alt="BLOOD MIXER" /></td>
<td><img src="image3.png" alt="BARREL PNEUMATIC" /></td>
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<tr>
<th>NAIL REMOVER</th>
<th>LEG HAIR</th>
<th>STOMACH WASHER</th>
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<tr>
<th>WASHING INTESTINES</th>
<th>BAILING TRIP</th>
<th>STRETCHING THE INTESTINES</th>
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<td><img src="image8.png" alt="BAILING TRIP" /></td>
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<tr>
<th>CUTTER HEADS</th>
<th>LOAD ARM</th>
<th>BLOOD PUMP</th>
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<td><img src="image10.png" alt="CUTTER HEADS" /></td>
<td><img src="image11.png" alt="LOAD ARM" /></td>
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## 7 HYGIENE

<table>
<thead>
<tr>
<th>HYGIENIC WALL</th>
<th>PEDAL SINKS</th>
<th>SINK OF KNEE</th>
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<td><img src="image1.png" alt="Image" /></td>
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<tr>
<td>MULTIPLE SINK</td>
<td>DISINFECTED KNIVES</td>
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<td><img src="image6.png" alt="Image" /></td>
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<tr>
<td>LAVA APRON</td>
<td>LAVA BOOTS STEEL</td>
<td>LAVA BOOTS AUTOMATIC</td>
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<tr>
<td>STERILIZER CABINET HOLDER</td>
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MACHINERY FOR SLAUGHTER

CARS AND HOOKS

CATTLE BLEEDING | BLEEDING | DOUBLE RAIL HOOK
|                  |         | Ø16 /18 mm

STICK WITH CAMAL DOUBLE RAIL | STICK WITH CAMAL CROWN | SHEEP STORAGE

TUBULAR STEEL. EURO HOOK | STICK WITH CAMAL CROWN |

CATTLE TUBULAR | CATTLE TUBULAR | BIRD HOOKS