Tailored design of carcass chilling processes

Designs provided by DMRI ensure short pay back time on your investment

Carcass chilling has high impact on your capability to obtain a cost-effective production. Affected by the chilling process are:

- Yields through drip loss and chill loss
- Quality through drip loss, PSE, toughness, black bones occurrence and shelf life
- Optimal product temperature improving the cut-ability in the succeeding boning processes
- Food safety, decontamination, bacteriological growth and avoiding condensate drip on products
- Energy consumption

A well-designed chilling process will provide a chill loss of 1.0 to 1.2% depending on the speed of the heat extraction.

Looking solely at the profit gain from the chill loss, each percentage (1%) of chill loss corresponds to a profit loss of ~ EUR 1.3/carcass.
Design and implementation of a low temperature chilling process requires a possession of two competence areas, consisting of a complex interface between Meat Technological Process and Technical Process Design. DMRI is superior in the design of chilling processes, we possess knowledge in both areas.

**Meat Technological Process**

**OPTIMAL PRODUCT QUALITY FEATURES:**
- Optimal temperature profile
- Designed to avg. carcass kg & %
- Designed to the correct end mean cutting temperature
- Optimal decontamination

**THE GOAL:**
- Low shrink loss
- Low drip loss
- Avoid PSE
- Avoid cold shortening
- Postpone black bone occurrence
- Promote long shelf life
- Tender and juicy meat

**Technical Process Design**

**STRICT INTERFACE BETWEEN:**
- Conveying system
- Steel structure
- Building structure
- Refrigeration system

**HIGH PERFORMANCE:**
- Correct air velocity m/s
- Correct evaporator surface m²/unit
- Optimal de-frosting program
- Avoid condensation
- Avoid infiltration

**THE GOAL:**
- High operational reliability
- Low energy consumption
- Low maintenance costs
- Long lasting building structure