10 principles of Sanitary Equipment Design

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Sanitary Equipment Design

Here at Fusion Tech, we take sanitary equipment design seriously and guarantee our equipment meets all sanitary requirements of the meat and poultry industries set in place by the Equipment Design Task Force (EDTF). Our team adheres to every item on the EDTF checklist tool to ensure our equipment meets those principles.

Every piece of equipment is designed for 100% clean-ability, easy wash-down, and is manufactured with continuous TIG welds to prevent bacteria from harboring and growing. Ultimately, our commitment to sanitary design and construction decreases your maintenance costs and increases your bottom line.

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The Industry Standard

The following 10 Principles of Sanitary Equipment Design were created by the Equipment Design Task Force(EDTF) to reduce contamination and associated recalls in the meat and poultry industries, but are applicable to equipment for all food uses. You can learn more about these principles on the American Meat Institute Foundation's website.

Fusion Tech guarantees our products meet each of these 10 principles.

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#1 Cleanable to a Microbiological Level

Food equipment must be constructed to ensure effective and efficient cleaning over the like of the equipment. The equipment should be designed as to prevent bacterial ingress, survival, growth, and reproduction on both product and non-product contact surfaces of the equipment.

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#2

Made of Compatible Materials

Construction materials used for equipment must be completely compatible with the product, environment, cleaning, and sanitizing chemicals and the methods of cleaning and sanitation.

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#3 Accessible for Inspection, Maintenance, Cleaning & Sanitation

All parts of the equipment shall be readily accessible for inspection, maintenance, cleaning and sanitation without the use of tools.

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#4

No Product or Liquid Collection

Equipment should be self-draining to assure that liquid, which can harbor or promote the growth of bacteria, does not accumulate, pool or condense on the equipment.

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#5 Hollow Areas Should Be Hermetically Sealed

Hollow areas of equipment such as frames and rollers must be eliminated wherever possible or permanently sealed. Bolts, studs, mounting plates, brackets, junction boxes, nameplates, end caps, sleeves, and other items must be continuously welded to the surfaces, not attached via drilled and taped holes.

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#6

No Niches

Equipment parts should be free of niches such as pits, cracks, corrosion, recesses, open seams, gaps, lap seams, protruding ledges, inside threads, bolt rivets and dead ends.

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#7 Sanitary Operational Performance

During normal operations, the equipment must perform so it does not contribute to unsanitary conditions or the harborage and growth of bacteria.

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#8 Hygienic Design of Maintenance Enclosures

Maintenance enclosures and human machine interfaces such as push buttons, valve handles, switches and touchscreens, must be designed to ensure that product residue or water does not penetrate or accumulate in and on the enclosure or interface. Also, physical design of the enclosures should be sloped or pitched to avoid use as a storage area or residue accumulation point.

#9 Hygienic Compatibility With Other Plant Systems

Equipment that requires additional sub systems, such as exhaust, drainage, or automated cleaning systems, does not create sanitary design risk because of the soil load, operational conditions, or standard sanitation operating procedures. Consideration is given to exhaust duct design, the ability for drain lines to remove effluent effectively (especially when dealing with vessels), and the effectiveness of CIP systems for the process. This means the team completing the checklist is taking a look at the equipment and its supporting systems together versus individually and evaluating how they will likely function as a system.

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#10 Validated Cleaning & Sanitizing Protocols

Procedures for cleaning and sanitation must be clearly written, designed and proven effective and efficient. Chemicals recommended for cleaning and sanitation must be compatible with the equipment and the manufacturing environment.

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About Fusion Tech

Fusion Tech Integrated, Inc. is a custom metal fabrication company with 15 years of experience and expertise in creating steel solutions for a variety of clients in the food processing, pharmaceutical, transportation, mining, renewable energy, and agricultural industries.

We specialize in providing innovative solutions for the food processing industry.

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