

OMEGA ICEHILL

~ A company dedicated to customized heat transfer solutions

INNOVATION

KEY TO FUTURE

HOW DO WE INNOVATE?

*Dilemma's of Innovators:

1. How to conceive new technology?
2. How will new technology improve things?
3. How to introduce to potential customers/industry?
4. How will it benefit to industry/consumer?

A PIONEER & INNOVATOR ~ CUSTOMIZED HEAT TRANSFER SOLUTIONS through LASER WELDING

*Main Advantages:

- Ease of fabrication and usage
- Can handle higher operating pressures
- High energy efficiency
- Durability



HIGH NUTRITION ANIMAL FEED

It all starts with our dairy farmers. They feed their cattle with high quality nutrients under expert supervision. As a result each healthy animal produces milk of the highest quality.



QUALITY CHECK AT COLLECTION CENTER

Skilled personnel at collection centers ensure that this high quality milk is tested and chilled immediately to prevent bacterial growth.



STATE-OF-THE-ART PROCESSING AT DAIRY

Then our experts at the dairies analyze and process this milk using state-of-art technologies.



HIGH QUALITY FOOD GRADE PACKAGING

Finally, the milk is packed by modern machines in high quality food grade packaging material under stringent quality checks before it reaches our consumers.



OMEGA IN MILK CHILLING

*Advantages – Bulk Milk Cooler:

- Replaces old IBT type milk chilling system
- Faster cooling helps in maintaining quality of milk
- Ensures milk quality right from the farm stage

OMEGA AT DAIRY PROCESSING PLANTS

*Various Solutions offered by Omega:

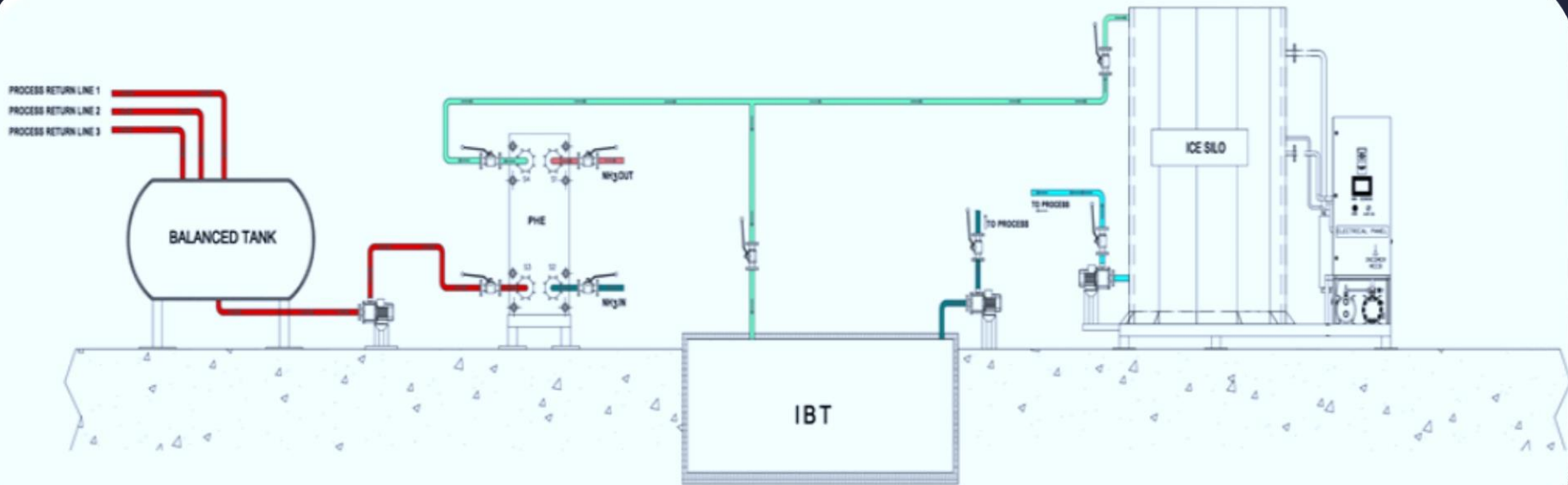
- Processing Tanks/Vessels
- Falling Film Chillers
- Ice Generating Systems
- Evaporative Condensers (under development)

ENERGY INTENSITY AT A DAIRY PLANT

Refrigeration process

- Consumes maximum energy
- Vital for maintaining quality

CURRENT SET-UP FOR PROCESS RETURN WATER



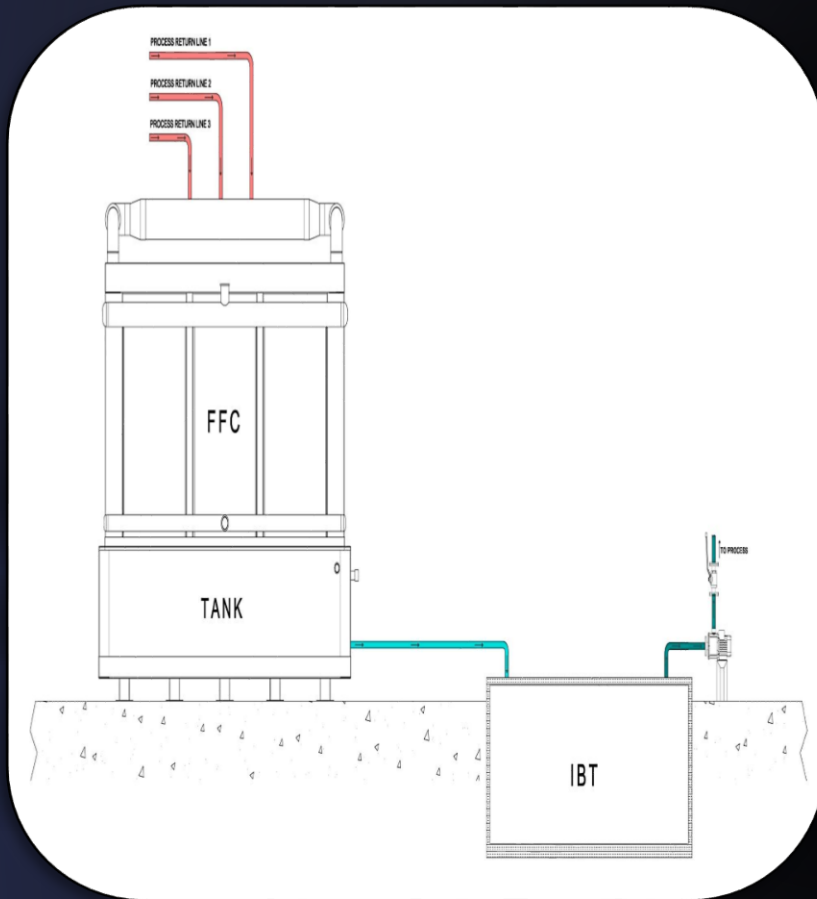
OPTIMISED SOLUTIONS

*Three main solutions:

- Falling Film Chiller with Tank
- Falling Film Chiller Evaporator combined with existing IBT
- Ice Silo with Falling Film Chiller cum Flake Ice Machine

FALLING FILM CHILLER

WITH TANK

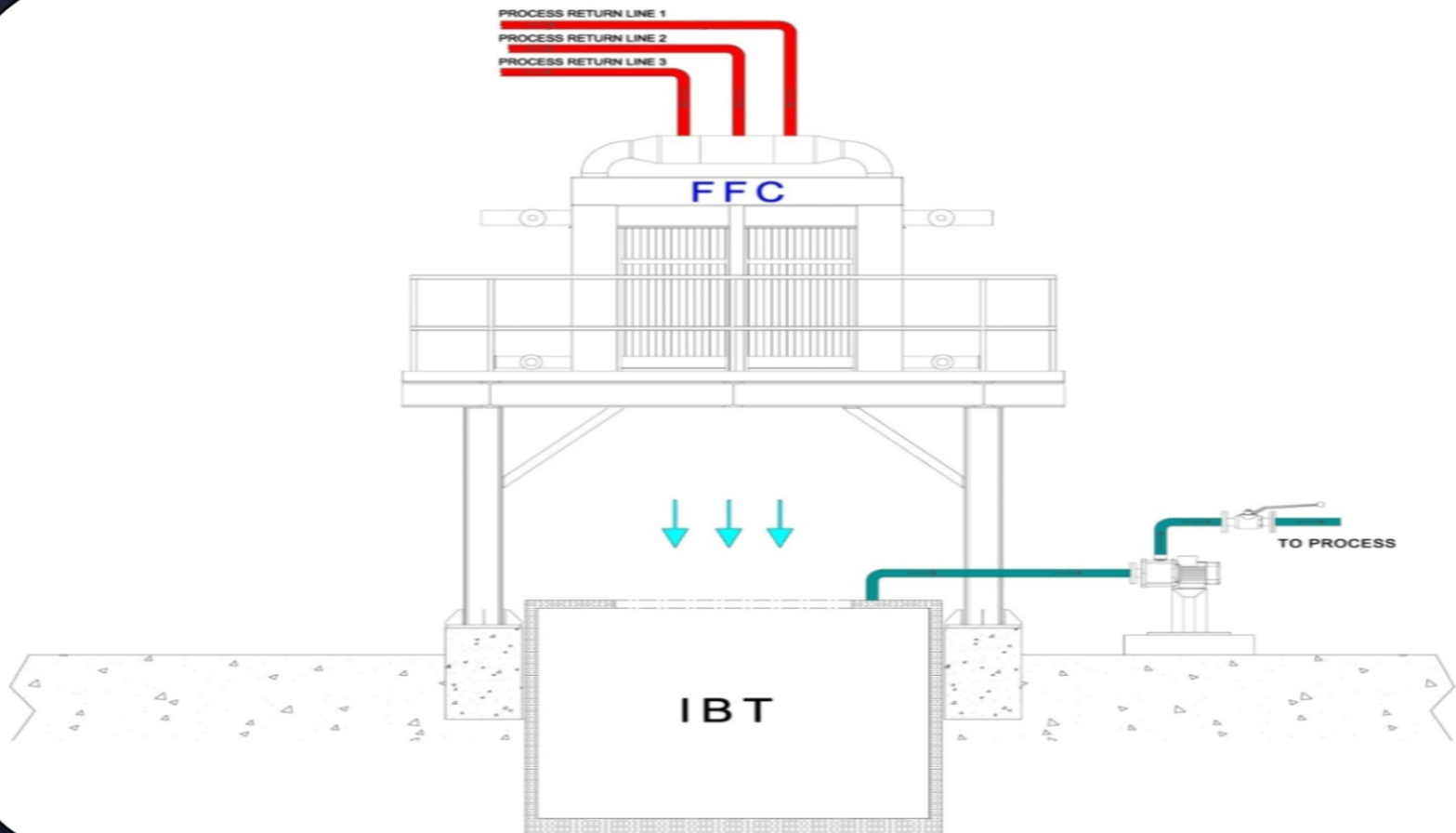


ADVANTAGES

- * Water temp. (0.5-1°C)
- * Simple maintenance & easy cleaning
- * No damage risk from freeze-ups
- * Continuous production of chilled water

FALLING FILM CHILLER

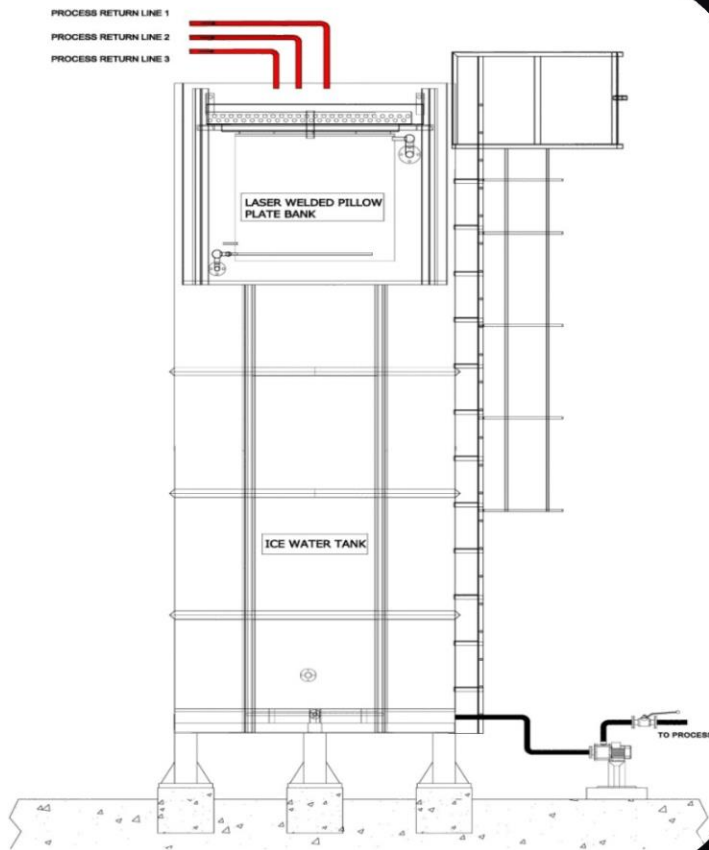
COMBINED WITH EXISTING IBT



ICE SILO

WITH FFC cum FLAKE ICE MACHINE

ADVANTAGES



- * Low refrigerant charge system
- * Lower investment
- * Load leveling, shifting features for favorable use of electricity

PROCESS HEAT RECOVERIES

- * It carries recoverable useful heat



Air to Air Heat
Exchanger

- * Omega's unique solution with CIP (Clean In Place) helps in recovering heat

ENERGY COMPARISON BETWEEN PHE AND FFC

Particular	FFC	PHE
Water Capacity	100000	100000
Refrigerant Capacity	Constant	Constant
Environment Condition	Constant	Constant
Water Outlet	1 °C	2 °C
Capacity =	M x Cp X Δ T	KJ
	418000	KJ
	418000	KW-Sec
	116	KW-Hr
Power Unit Rate =	8	Rs/ Unit
Power Saving =	929	Rs / Hr
	18578	Rs./ Day (assuming 20 Hrs Working)
	5573333	Rs./ Year (assuming 300 Days Working)