



# Fiskevelferd som suksessfaktor

AquaNext 2023

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# MMC FIRST PROCESS

## AQUACULTURE

- Wellboat
- Aquaculture processing
- Stun and bleed vessel
- Land based farming
- Closed cage farming
- Holding tank

## ENERGY EFFICIENCY

- Cooling
- Energy

## WILD CATCH

- Pelagic fishing vessel
- Pelagic processing
- White fish vessel

## SERVICE & AFTERSALES

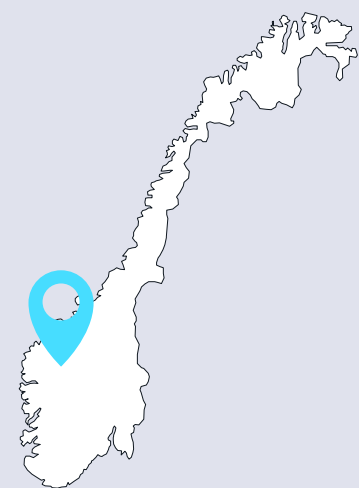
- 24/7 Service

## GLOBAL FOCUS

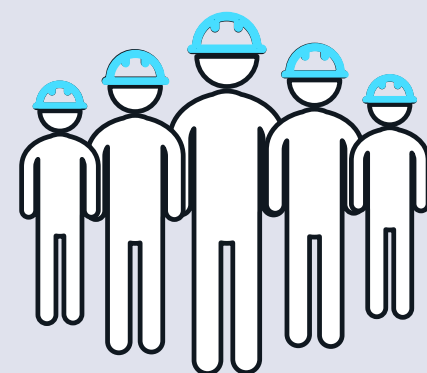
- Norway and North Sea area
- Iceland
- Chile, Peru and Ecuador
- Japan, Korea
- West Africa
- USA, Canada

# A GLOBAL LEADER FISH HANDLING TECHNOLOGY

## Company overview



Headquartered on  
the west coast of  
Norway



~230 employees



Market leading  
position within fish  
handling

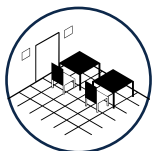
35 years  
experience

Long track record  
and know-how

## Locations



Digerneset, Ålesund



2,100 m2 office space



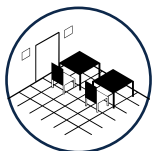
2,200 m2 assembly & storage



85 employees



HQ: Fosnavåg Næringspark



1,930 m2 office space<sup>(1)</sup>



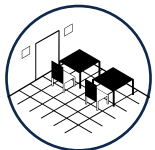
2,940 m2 production & storage<sup>(1)</sup>



130 employees



Haugesund



230 m2 office space



760 m2 production & storage



15 employees

# WE COME FROM WELLBOAT

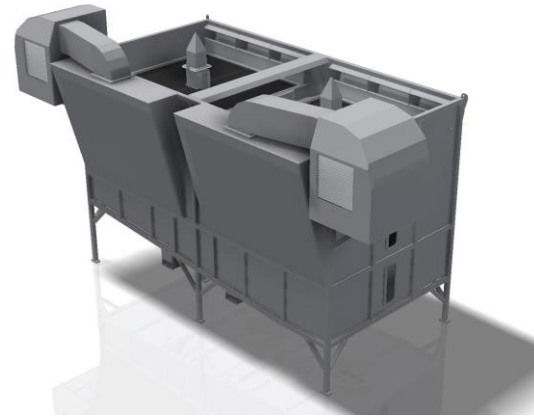


# WELLBOATS

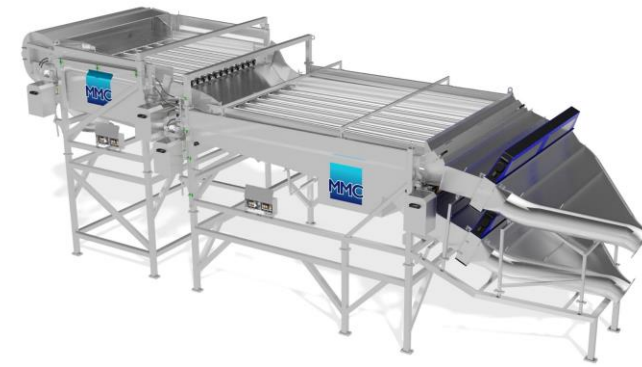


# TOTAL SYSTEM SUPPLIER TO THE WELLBOAT

CO2 Degassing



Grading Systems



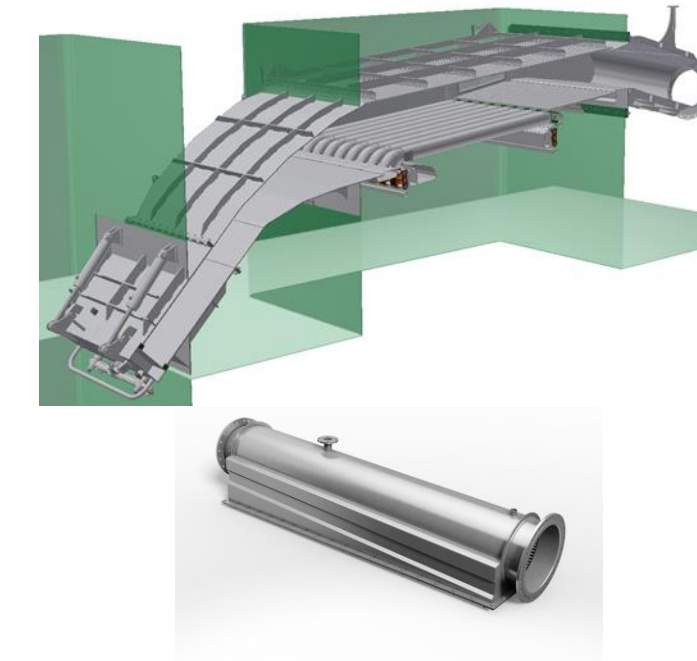
Automation and Control



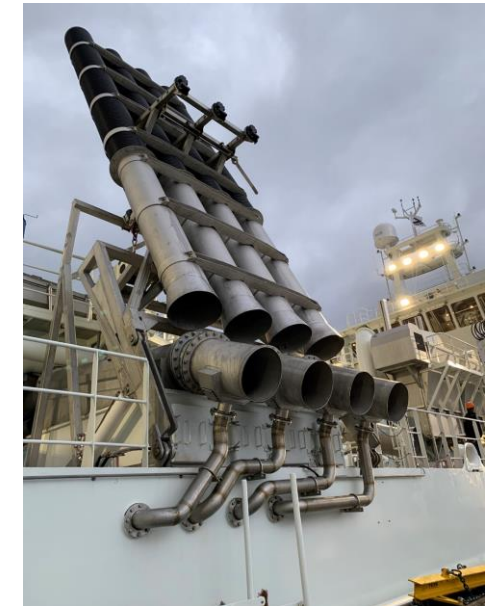
Vacuum PUMP system



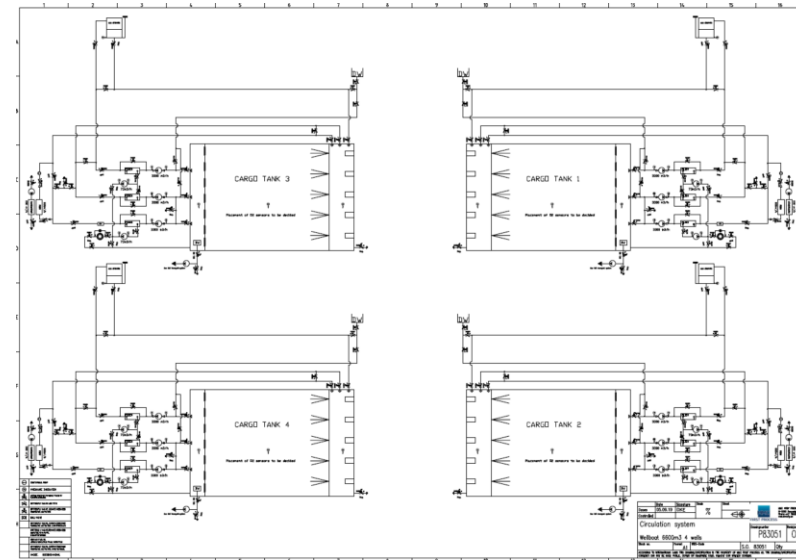
Dewater units



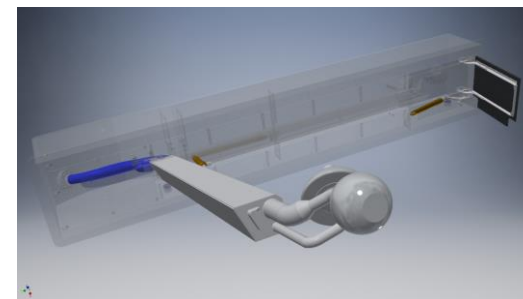
Pipe transport systems



System Design



Washing System



Circulation Pumps and Valves



Medicine Mixer



RSW Cooling systems



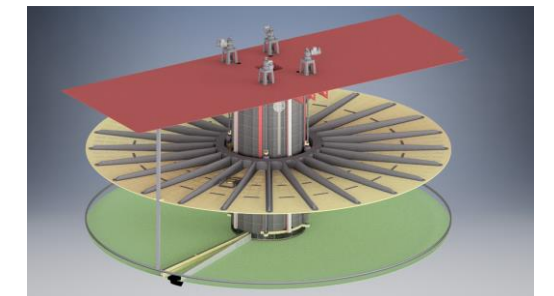
Oxygen and Ozone systems



Sensor LAB



Crowding GRID



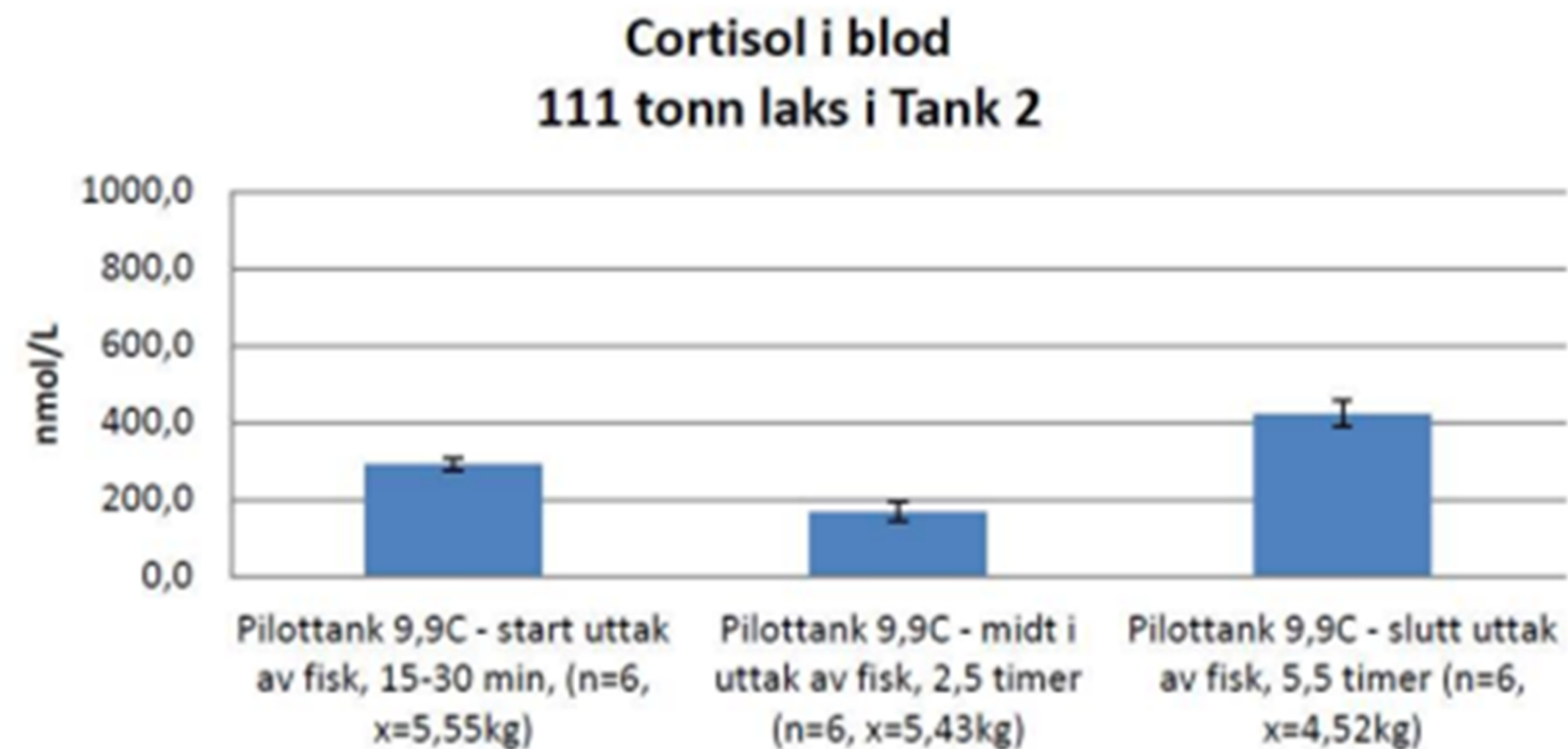
Filter and UV



# Lave stressnivå gjennom hele trengeprosessen

## Prosjekt; Kvalitetsmålinger i Foredling

Stress – Blodverdier –  
Fisk ut av FHT (2016)



# MMCFP'S HOLDING TANKS ENABLE A STEP-CHANGE IN FISH WELFARE, THEREBY INCREASING QUALITY AND VALUE OF FISH

Focus on fish welfare has yielded Bremnes Seashore one of the most exclusive brands in the industry

Achieved goals



**BREMNES SEASHORE**

**Key solution delivered by MMCFP: Two 850m<sup>3</sup> holding tanks**

Two 850m<sup>3</sup> holding tanks for storing live fish before processing. By keeping the fish in the holding tanks, stress levels are significantly lowered, resulting in industry leading fish quality



Short time from live fish to finished product enabled by MMCFP



SALMA er den originale ferskpakkede lakseloinen med sashimikvalitet. SALMA er førsteklasses norsk håndverk, og alle ledd av produksjonen foregår i Norge. SALMA produseres av det familieeide selskapet Bremnes Seashore, på Bømlo.

THE ORIGINAL FINE LOINS

MADE FROM THE LEANEST AND FINEST PARTS OF SALMON

**SALMA**

RICH HALF BELLY LOIN SKIN- AND BONELESS

FROM FRESH SALMON TO SALMA IN LESS THAN FOUR HOURS

FROM FRESH SALMON TO SALMA IN LESS THAN FOUR HOURS

- ✓ Less stressed fish
- ✓ Long time to rigor
- ✓ Better fish welfare
- ✓ Better quality
- ✓ Successful branding
- ✓ Higher market price

**Bremnes processing facility key facts**

- Free chilling from deep sea, 6°C – 8°C year-round
- Processing capacity of 50,000 tons fish annually
- Water treatment – open and closed condition
- Gentle and continued transport to processing

**Key properties of MMCFP's holding tanks solutions**

Controlled environment

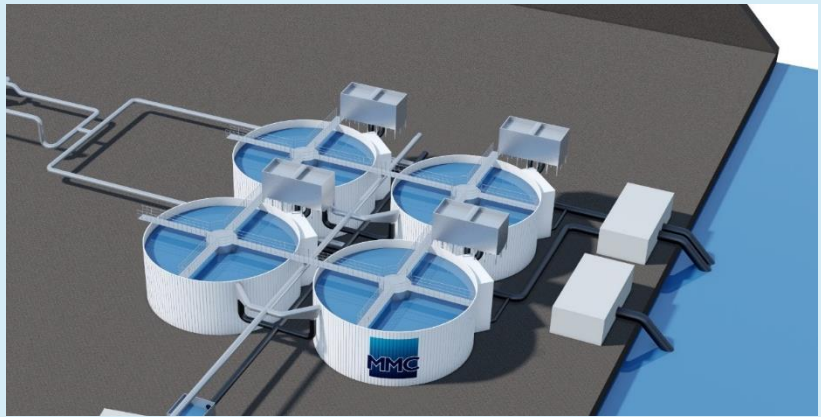
Good water circulation

Stripping of CO<sub>2</sub>

Adding Oxygen

Homogenic water quality

Monitoring water quality

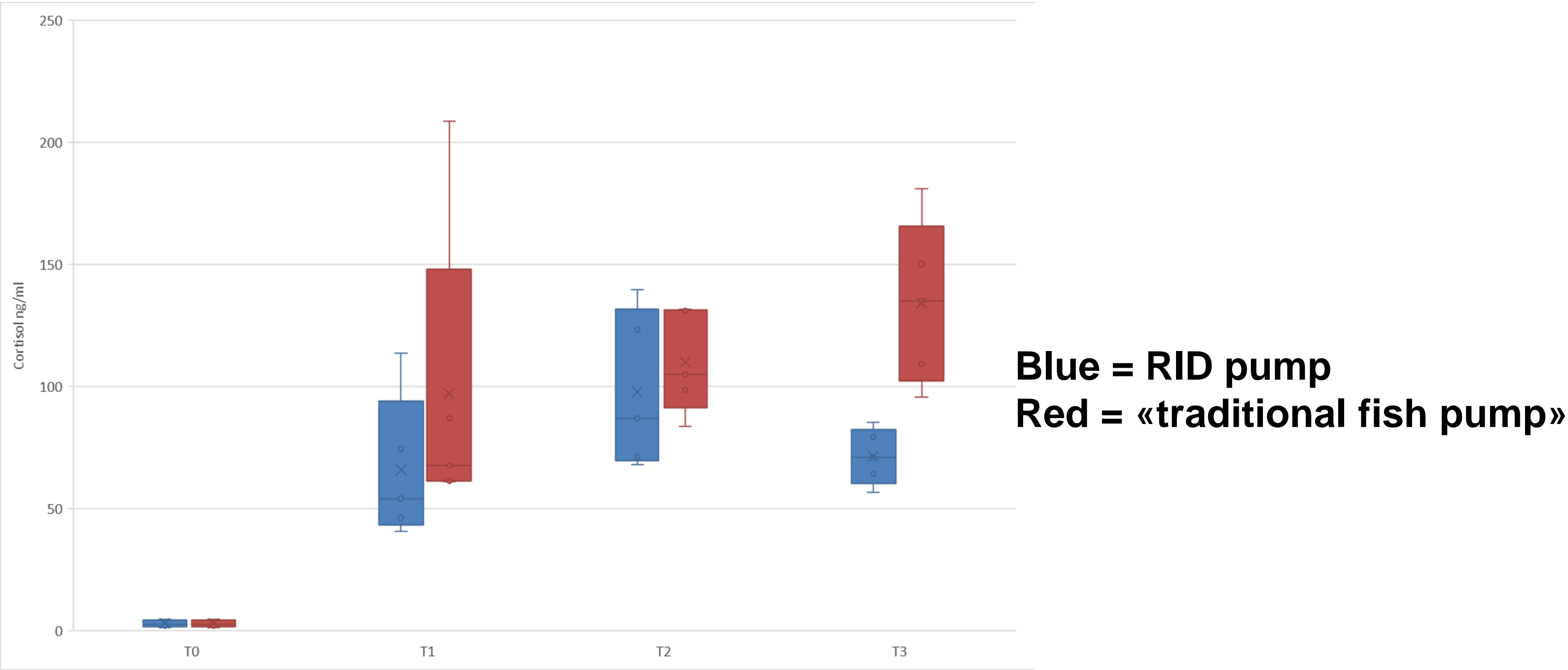


# MMC FP – RID PUMP



CONCLUSION FROM TEST:

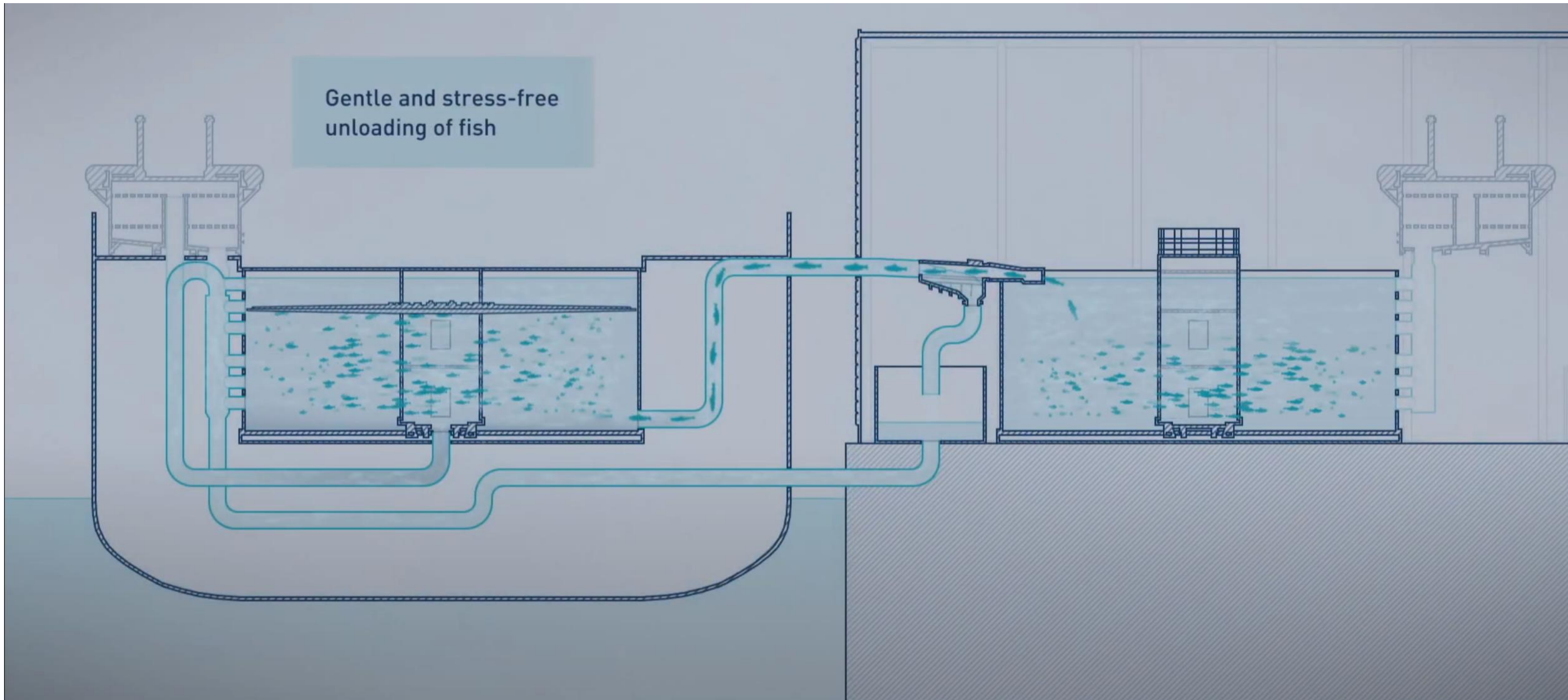
THERE IS A SIGNIFICANT DIFFERENCE BETWEEN THE PUMP TECHNOLOGY AND THE CORTISOL LEVELS PRODUCED BY THE FISH. IN THIS TEST THE RID PUMP CONTRIBUTE TO A LOWER LEVELS OF CORTISOL.



# INNSPURT PÅ INNLEGG



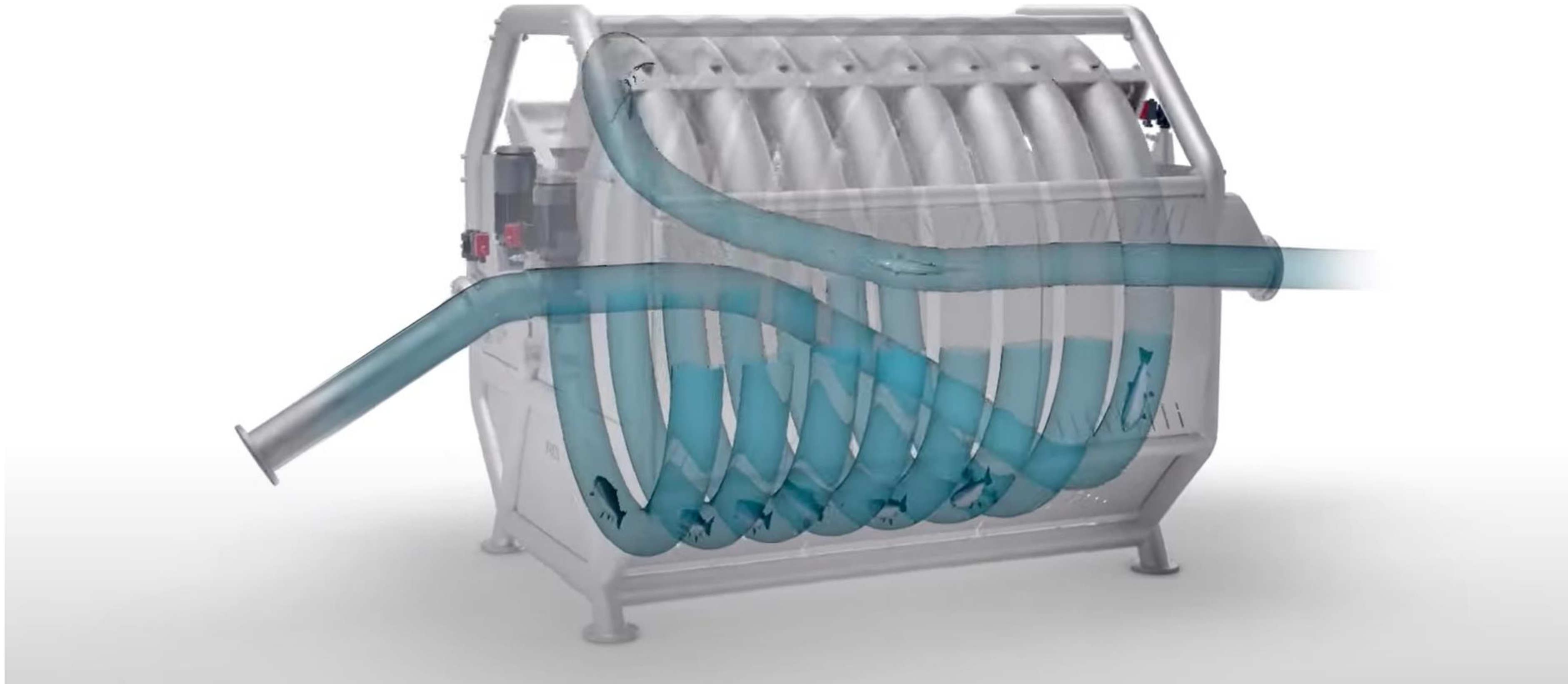
# 1. TRYGG HÅNDTERING GIR GOD FISKEVELFERD



## 2. GOD FISKEVELFERD GIR KVALITET



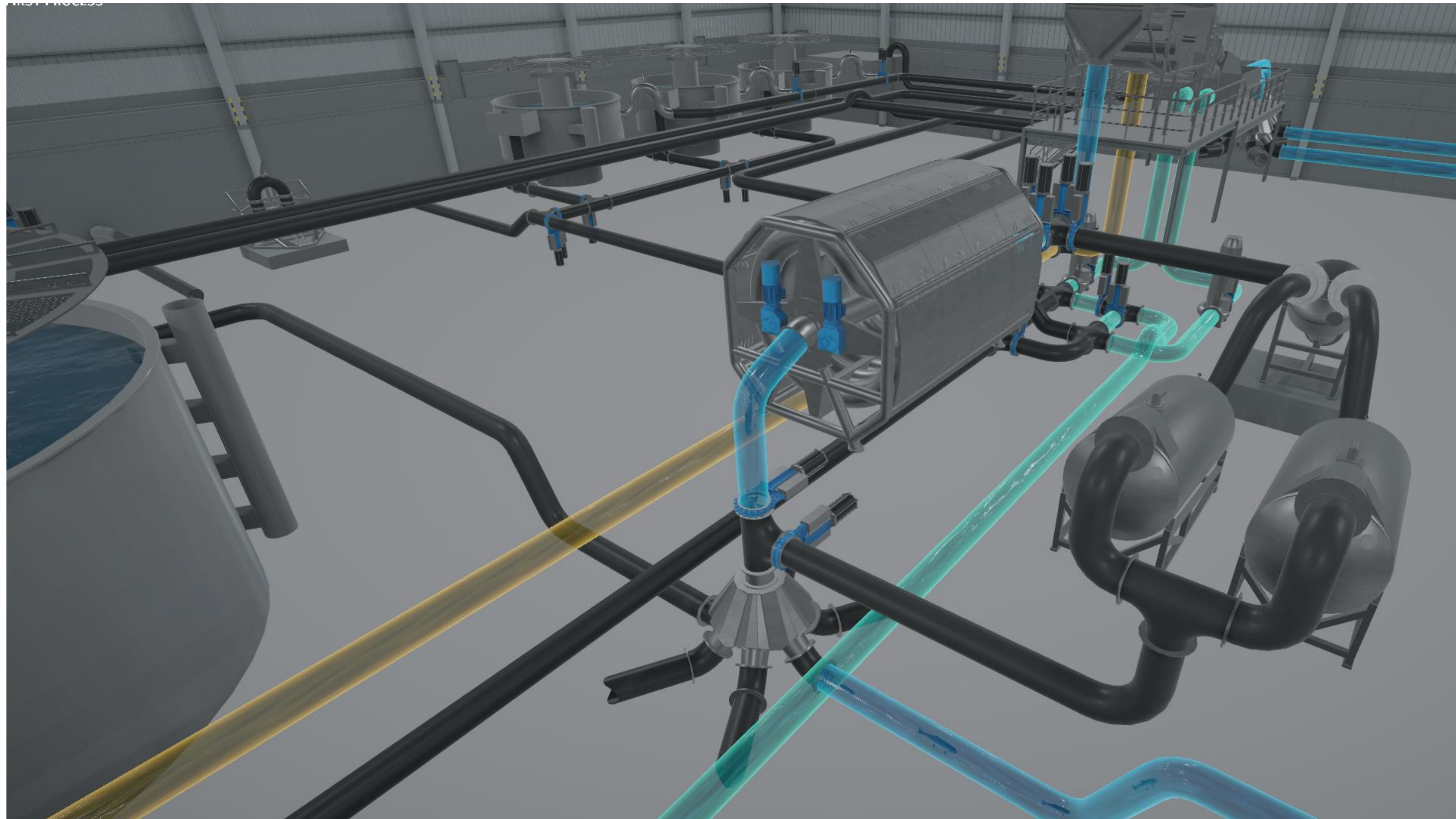
### 3. NY PUMPETEKNOLOGI GIR BEDRE FISKEVELFERD MMC FIRST PROCESS – RID PUMP



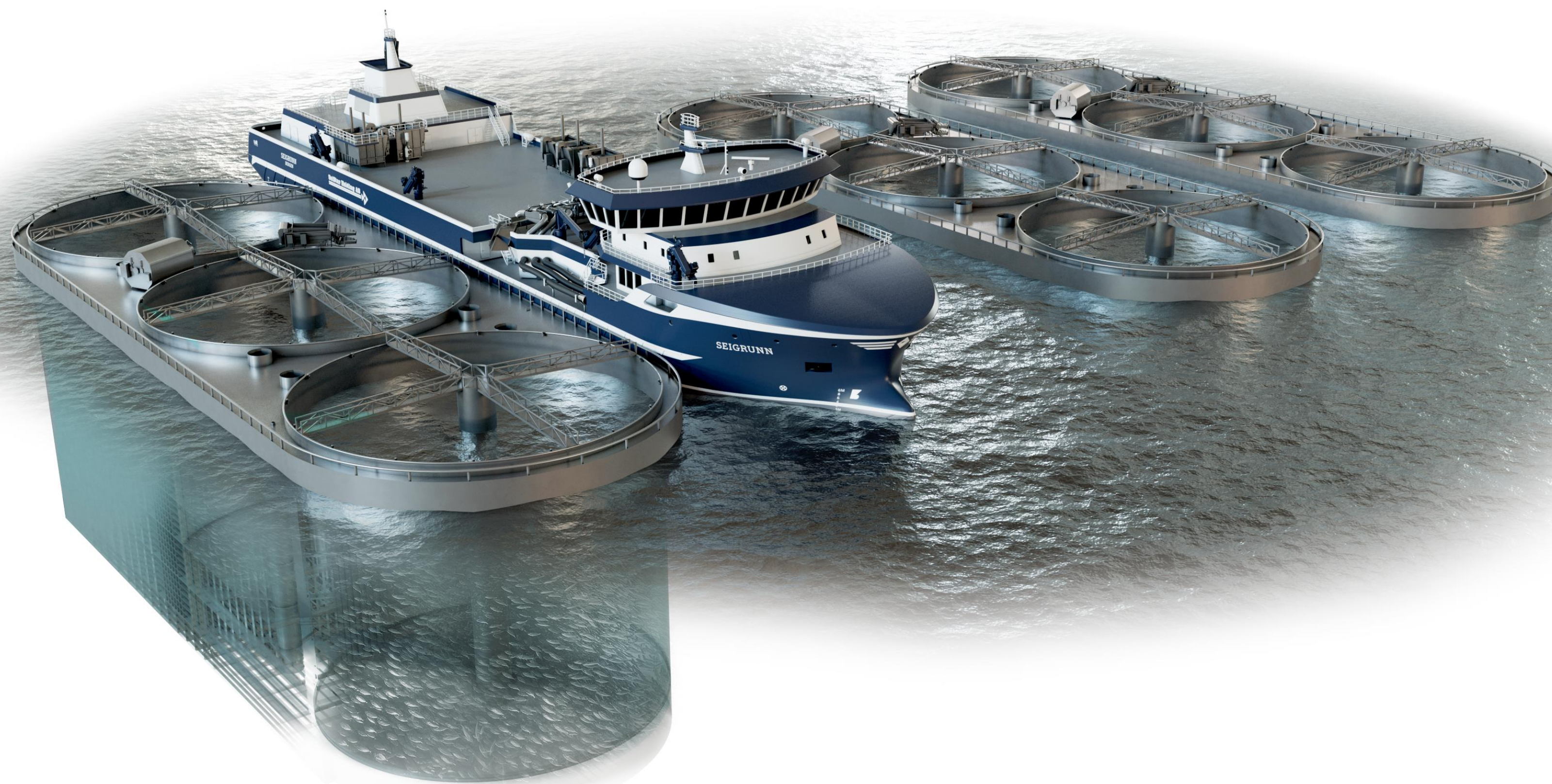
# NYE ANVENDELSER AV «PROVEN TECHNOLOGY» FOR GOD FISKEVELFERD



# SYSTEMLØSNINGER FOR GOD FISKEVELFERD I LANDBASERT OPPDRETT



# MMC FIRST PROCESS CFF CLOSED FISH FARMING



# A COMPLETE GAME CHANGER