GROUPE STURNO

AQUADEP

WWTP
Le Bignon (France)
NIFAS® Technology

Treatment with **BioDisks only**
► **Nitrification**
Coupled to a **NIFAS® tank** with
activated sludge ► Denitrification

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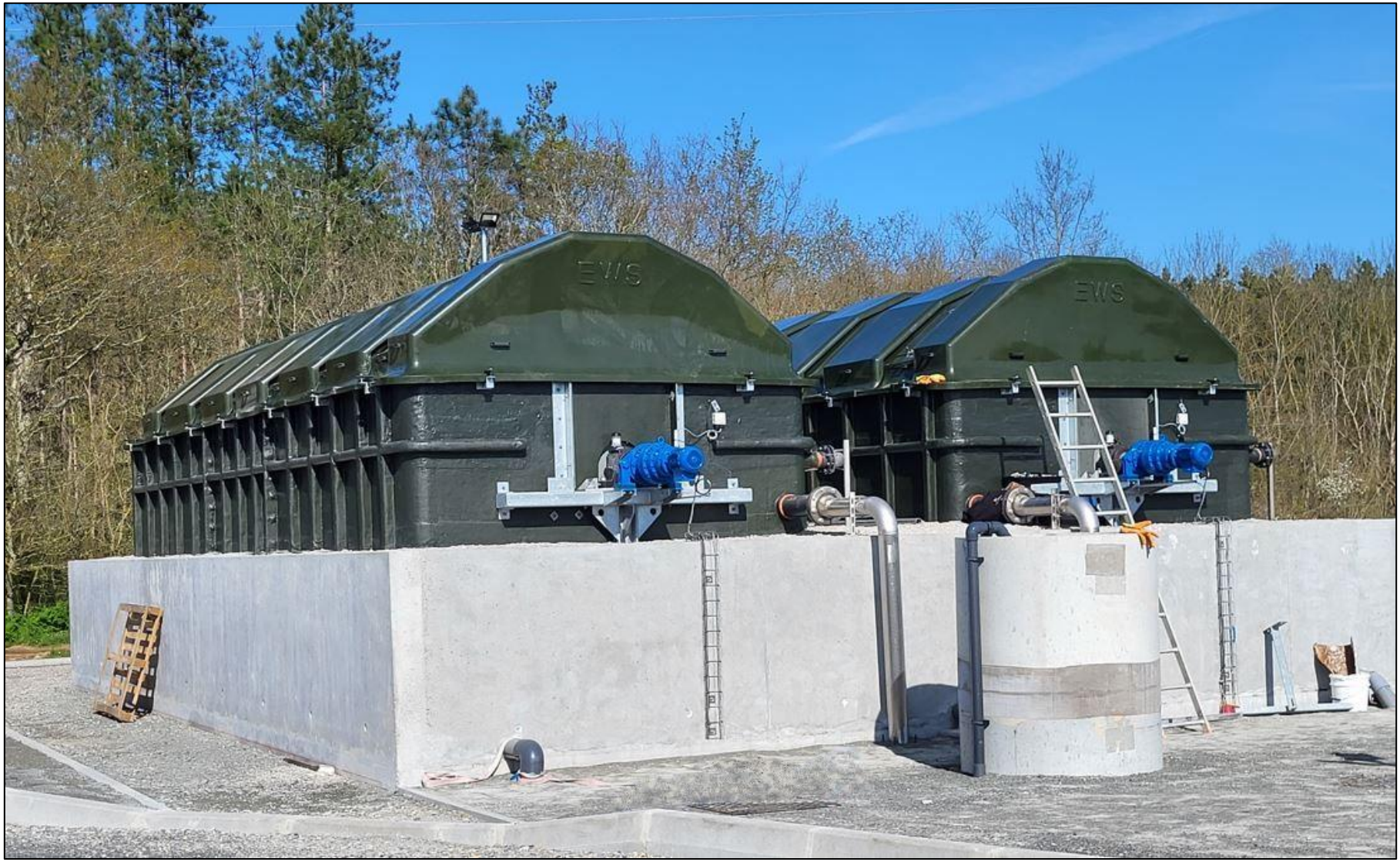
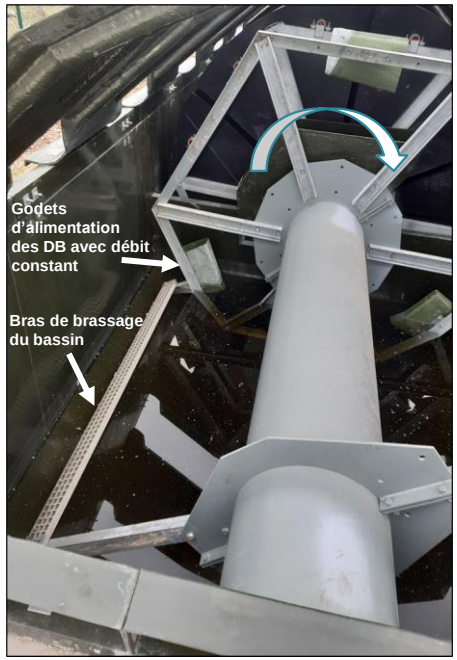
NIFAS ® Technology



WWTP under construction – Capacité 800 PE – Two EWwS units

NIFAS ® Technology



NIFAS® Technology :

Wastewater treatment technology with exceptional quality discharge thresholds!

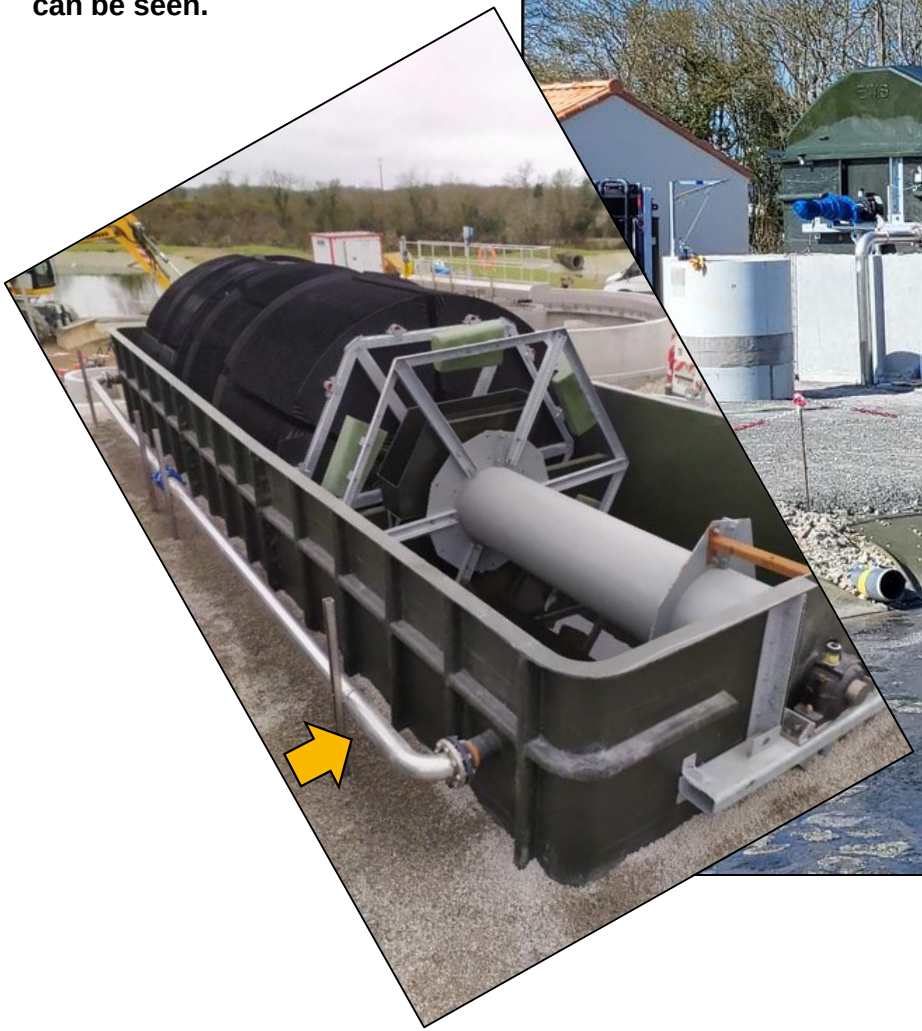
With the EWwS ltd **NIFAS®** technology we have combined the advantages of two biological treatments for wastewater: Biodisks (fixed cultures) for organic treatment and nitrification with low energy requirements as well as activated sludge allowing for denitrification without the need for additional energy.
NIFAS® technology makes it possible to achieve the following rejection thresholds:
BOD_5 < 10 mg/l, TSS < 10 mg/l, COD < 50 mg/l, NH_4-N < 1 mg/l, TNK < 1.5 mg/l, TN < 15 mg/l.
When these high quality effluents are not mandatory, the discharge rates generally required will allow the choice of a smaller WWTP solution with better effluent quality.

- ❑ Simple operation with stable process performance.
- ❑ Reduced carbon footprint thanks to reduced energy consumption.
- ❑ Lower surface footprint for a similar discharge quality.

NIFAS® Technology

NIFAS® XXTP under construction at Le Bignon in France.

The pipeline of a partial water recirculation between the exit of the BioDisks and the NIFAS® tank can be seen.



NIFAS ® Technology

Resultats obtained at the WWTP in Le Bignon (France).

Minimum reject threshold requirements : COD < 90 mg/l, BOD_5 < 25 mg/l, TSS < 20 mg/l, TNK < 70 mg/l, TN < 70 mg/l et TP < 2 mg/l.

Analysis 24h	8 Nov 2023 *)		η in %	22 May 2024		η in %	1 Aug 2024		η in %	16 Sept 2024		η in %
	Infeed	Outfeed		Infeed	Outfeed		Infeed	Outfeed		Infeed	Outfeed	
Flow m^3/d	247	243		235	210		110	100		74		
BOD_5	188	4,97	**97**	700	4,1	**99,4**	645	1,4	**99,8**	350	4,9	**98,6**
COD	465	38,3	**92**	1270	39	**96,9**	1520	33	**97,8**	1100	35	**96,8**
SST	264	13,5	**95**	420	12	**97,1**	500	9,6	**98**	370	3,2	**99,1**
TNK	31,6	9,3	**70,6**	65	2,1	**96,8**	71	2,4	**96,6**	85	3,2	**96,2**
$N\text{-}NH_4$	19,4	7,1	**63**	12,4	0,2	**98,4**	41	0,1	**99,7**	57	1,1	**98,0**
$N\text{-}NO_2$	0,05	0,46		0,28	0,28		0,18	0,44		0,094	0,159	
$N\text{-}NO_3$	0,05	0,93		0,65	1,6		0,2	3,6		0,3	2,52	
TN	31,8	10,7	**66**	65,93	3,98	**94**	71,39	6,44	**91**	83,39	5,88	**92,9**
TP	5,2	0,25	**95**	17,9	0,26	**98,5**	13,7	0,27	**98**	12,6	0,24	**98,1**
Load in PE	**774**			**2741**			**1182**			**432**		

*) Before on-site intervention by EWwS Ltd to reduce the feed volume to the BiolDisks on March 28, 2024, which improved the yields.