

Waterdokter.nl was involved in Harnaspolder start-up.....



Foto: www.aeroview.nl

**Harnaspolder Waste Water Treatment Plant,
The Hague, The Netherlands (mid 2006)**



**Ing. Michiel A. Doude van Troostwijk
opens inlet valve (4 September 2006)**



First water in Harnaspolder!!

Pictures Harnaspolder Waste Water Treatment Plant©



Harnaspolder December 2006



Meva Grid Dewatering Equipment



One of the MCC's

Figures Harnaspolder WWTP	
Number of settlers, clarifiers	4 & 16
Number of biological tanks	8
Diameter, Depth biological tank	65 & 8 m.
Maximum Flow	36.000 m ³ /h
Pollution Load	1.300.000 i.e.
Plant Surface	25 ha (=62 a)
Investment Plant	± 370M€
Investment Network	± 370M€



Leaking Seal (a minor upset)



Emergency Diesel



One of the 16 Secondary Clarifiers



Cone of a Clarifier

Start up issues:

During Start-up of Harnaspolder nothing serious went wrong.

After first severe rain, screens performed very well regarding grid removal. Transport screws blocked once, after increasing run time settings they continued to perform very good as well. Capacity grid distribution arm to containers seemed critical and is increased. Plant roughly met his WVO permit requirements for nitrogen removal in about 8 weeks after start-up. Two biological tanks were seeded with only 0,1 g/l hardly denitrifying biological sludge.

Some minor communication challenges between blowers and PLC/SCADA were solved while blowers were operated manually.



Air Treatment Ventilators



**The Smallest of 5 PLC's
(HP has app. 8500 IO's)**



Nijhuis Effluent Pumps 5 x 12000m³/h



Ing. Michiel A. Doude van Troostwijk is proud that he was a member of the Commissioning & Start-up Team of The Netherlands biggest municipal waste water treatment plant (July 2006 - January 2007).

Please see: www.veoliawater.com and www.delfluent.nl for details.

Pictures Harnaspolder Waste Water Treatment Plant ©

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