

# CoolBLUE® and NaLA®

A MORE Powerful Solution

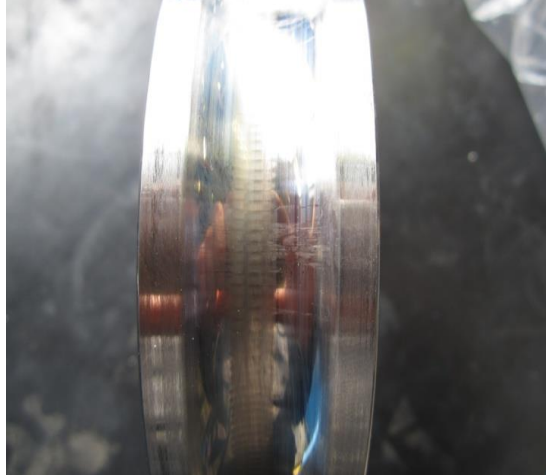
MH&W International Corp. – 575 Corporate Drive, Lobby 4, Mahwah, NJ 07430  
Phone : ( 201 ) 252-8125 Web: www.Coolblue-mhw.com

## Application Example for the Use of CoolBLUE®

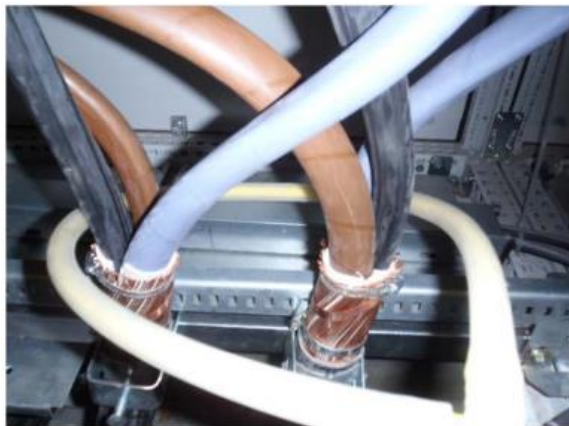
Damaged bearing of a pump unit due to circular currents



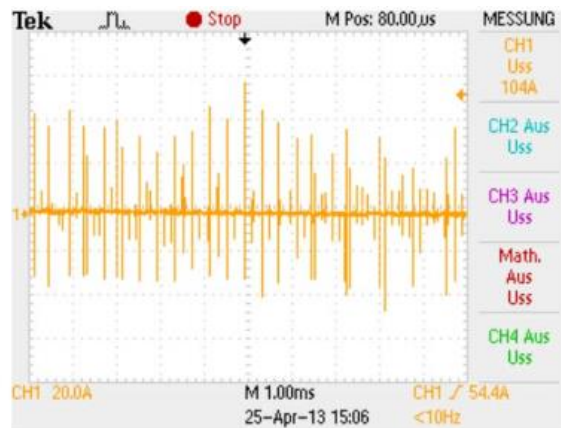
Picture 1: Pump unit



The measurements were done before and after application of CoolBLUE® Nanocrystalline cores at constant speed, without load.



Picture 2,1: Original condition



Picture 2,2: CM current at drive output  
20A/Div, 1ms/Div > I<sub>ss</sub> ca. **104 Amps**

Solution: Installed 2 nanocrystalline CoolBLUE® tape wound cores  
Part number - CBO326HP1632+A23

# CoolBLUE® and NaLA®

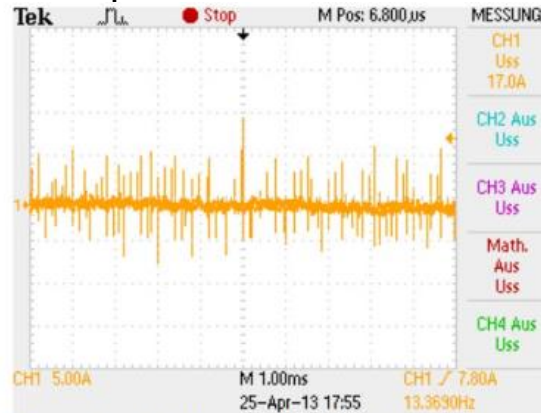
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## Measurement 1: CM current at drive output

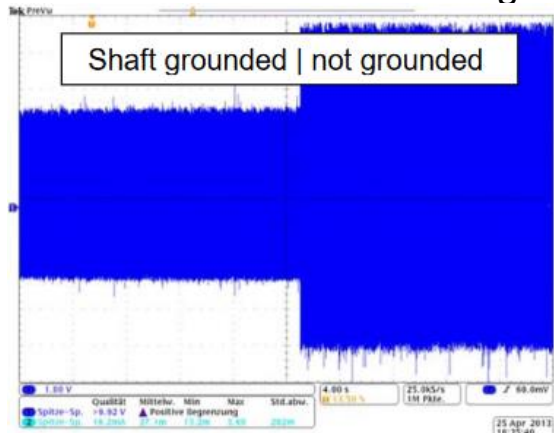


Picture 3,1: Use of 2 cores CBO326HP1632+A23

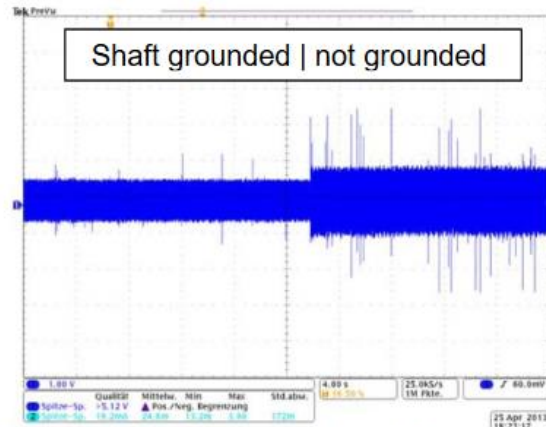


Picture 3,2: 5A/Div, 1ms/Div > I<sub>ss</sub> ca. **17 Amps**

## Measurement 2: Shaft voltage



Picture 4: Original condition  
1V/Div > U<sub>ss</sub> max ca. **10 V**



Picture 5: Use of 2 cores CBO326HP1632+A23  
1V/Div > U<sub>ss</sub> ca. **5,5 V**

## Conclusion:

By using 2 CoolBLUE® Nanocrystalline cores, CBO326HP1632+A23, from MH&W, per drive peak-peak value of the CM current on the motor reduced from 104Amps to 17Amps...factor of 6!  
Additionally, the shaft voltage – measured as peak-peak value reduced from 10V to 5.5V, and the number of peaks were significantly lower.