



Avslutningskonferansen for prosjektet
Støy i petroleumsindustrien
Quality Hotel Residence 2. april 2014

Hør!

Oppsummering sett fra fagforeningenes side

<http://norskoljeoggass.no/no/Stoy>

Halvor Erikstein
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SAFE

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92810398



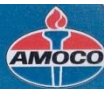


www.worksafe.vic.gov.au

Før og nå



<http://www.dagbladet.no/nyheter/2007/06/12/503356.html>



FoU-prosjekt:

Støy fra sandblåsing og ultra høytrykk vannblåsing

Et samarbeidsprosjekt mellom Amoco Norway Oil Company, Scana OT og Sinus as



★ Scana

SINUS

1998

STØYSAKEN

Verneutstyr som skader. Det går seint framover

<http://safe.no/index.cfm?id=258732>



2006

26 januar 2007 .Bruk av Viking Safe-Blast er ulovlig

<http://www.dagbladet.no/nyheter/2006/04/26/464555.html>

Old technology – the shale shaker

– high chemical exposure, high noise exposure, serious vibration



http://www.youtube.com/watch?v=NV_gBqbevWM

Boreslamsbehandling



<http://norskoljeoggass.no/no/Kalender/Frokostmote-HOR-Mud-Cube--Mindre-stoy-og-like-god-ytelse-som-vanlige-shakere/>



Bekymringsmelding: Manglende oppfølging og manglende forbedringsarbeid med helsefarlig arbeidsmiljø i områder for boreslamsbehandling.

<http://www.safe.no/index.cfm?id=398330>

The image shows a close-up of industrial machinery, likely a turbine or generator, with various pipes, cables, and structural elements. A yellow rectangular box is overlaid on the top portion of the image, containing the text 'Turbiner og ekstremstøy' in red. In the background, there are labels such as 'NB-02 SWC 15 T' and 'AL 8130'.

Turbiner og ekstremstøy

Lavfrekvent støy påvirker det indre øret

- It was shown that exposure to low-frequency sound may alter the inner ear. This results in an increase of sensitivity to low-frequency sounds, and as a result, previously imperceptible sounds becomes audible to the exposed person.
- Interactions between inner-ear responses to low and higher frequencies furthermore account for perception of low-frequency sound, as well as the property of the hearing system to perceive so-called difference tones.

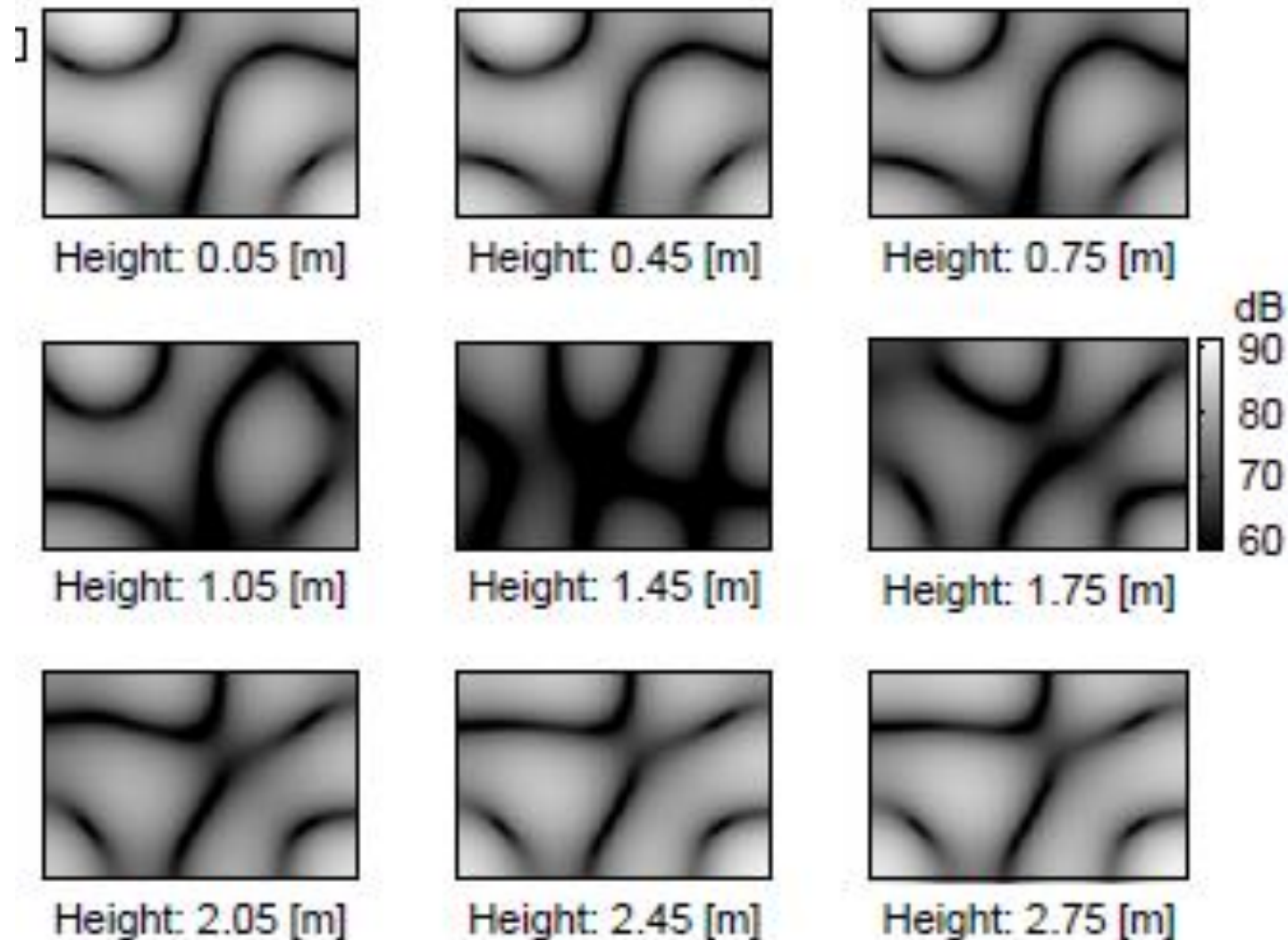


Figure 1: Sound pressure distribution in a 5.7 m by 3.8 m by 2.8 m ($L \times W \times H$) room. Left: Sinusoidal sound wave at 114 Hz. Right: Sinusoidal sound wave at 124 Hz (mode 2,2,1). Sound generated by piston in lower left corner indicated by rectangle. Simulated using FDTD with 0.1 m cell size and 6 kHz sampling frequency.

Om kartlegging av lavfrekvent støy

ON MEASURING LOW-FREQUENCY NOISE INDOORS

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ABSTRACT

Due to standing waves, the sound pressure within a room may vary 20-30 dB. For assessment of annoyance from low-frequency noise, it is important to measure a level that adequately represents the exposure that may give rise to the annoyance, rather than some room average level. Thus, mainly areas of the room with high sound pressure levels are of interest, since persons present in such areas are not helped by the existence of

Sources and effects of low-frequency noise

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The sources of human exposure to low-frequency noise and its effects are reviewed. Low-frequency noise is common as background noise in urban environments, and as an emission from many artificial sources: road vehicles, aircraft, industrial machinery, artillery and mining explosions, and air movement machinery including wind turbines, compressors, and ventilation or air-conditioning units. The effects of low-frequency noise are of particular concern because of its pervasiveness due to numerous sources, efficient propagation, and reduced efficacy of many structures (dwellings, walls, and hearing protection) in attenuating low-frequency noise compared with other noise. Intense low-frequency noise appears to produce clear symptoms including respiratory impairment and aural pain. Although the effects of lower intensities of low-frequency noise are difficult to establish for methodological reasons, evidence suggests that a number of adverse effects of noise in general arise from exposure to low-frequency noise: Loudness judgments and annoyance reactions are sometimes reported to be greater for low-frequency noise than other noises for equal sound-pressure level; annoyance is exacerbated by rattle or vibration induced by low-frequency noise; speech intelligibility may be reduced more by low-frequency noise than other noises except those in the frequency range of speech itself, because of the upward spread of masking. On the other hand, it is also possible that low-frequency noise provides some protection against the effects of simultaneous higher frequency noise on hearing. Research needs and policy decisions, based on what is currently known, are considered. © 1996 Acoustical Society of America.

PACS numbers: 43.50.Qp, 43.28.Dm

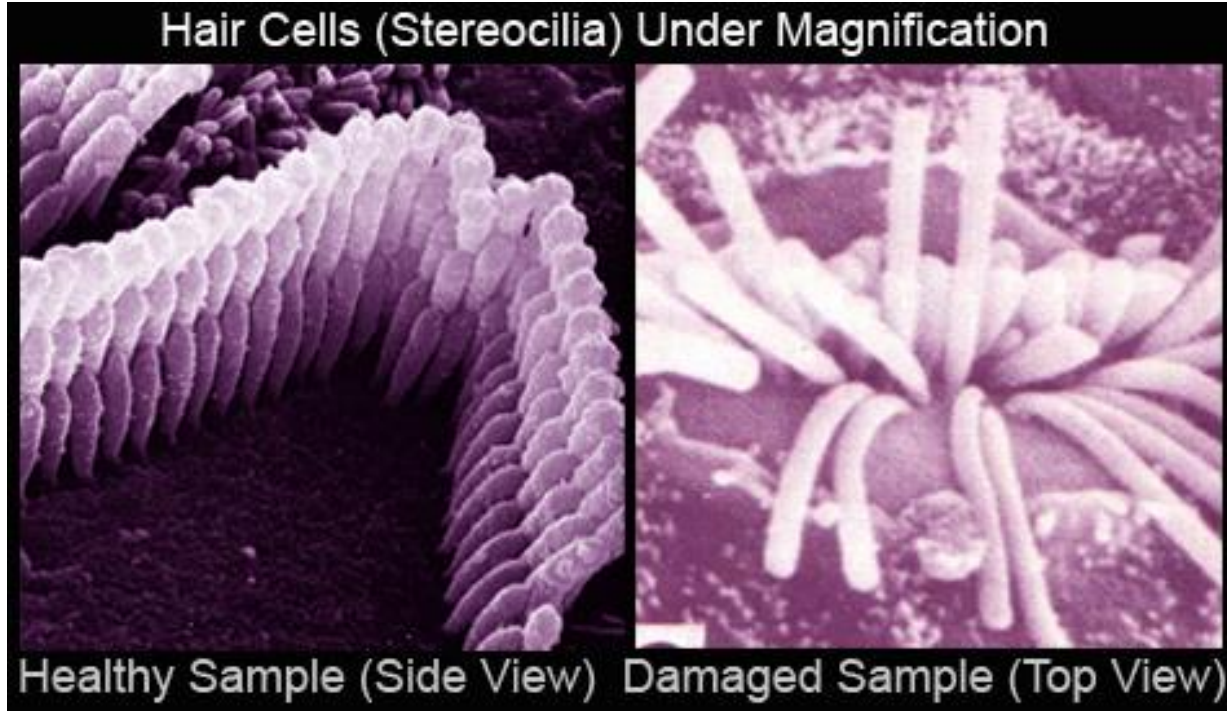
- Et kutt kan føre til en omfattende granskning og inndragning av skarpt verktøy, mens verktøy og prosesser som påfører "indre" og usynlige skader blir ikke rørt



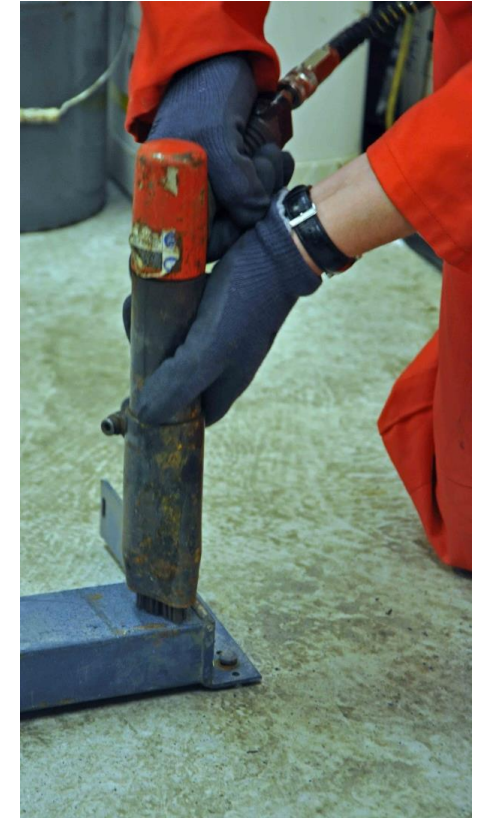
Utstyr som garantert gir skade på hørsel og hender blir fortsatt benyttet – hvorfor kan vi ikke være like konsekvente her?

Uskadde hørselsceller

Hair Cells (Stereocilia) Under Magnification



Skadde hørselsceller



Nålepikker, vinkelslipere, sandblåsing, ultra høytrykk vannblåsing.
Støynivå langt over 100 dbA

Bilde <http://www.generationdeaf.com/whatisnihl.html>

The Norwegian company SafetyTools has developed tools for effective and safe removal of coating prior to hot work:
WE CAN CALL IT: «HOT WORK MADE COLD»

by DET NORSKE VERITAS



The coolest cutting-edge technology in the world...

SAFETYTOOLS
ALMET  Keine Hitze – kein Risiko

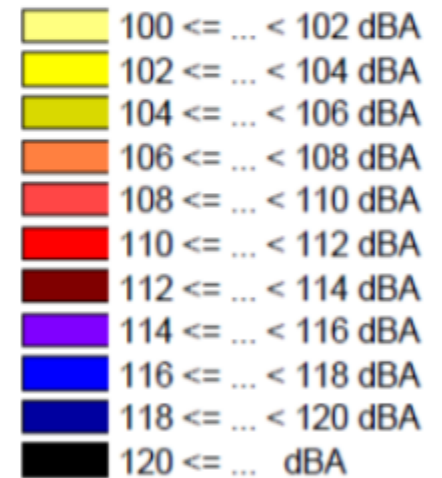
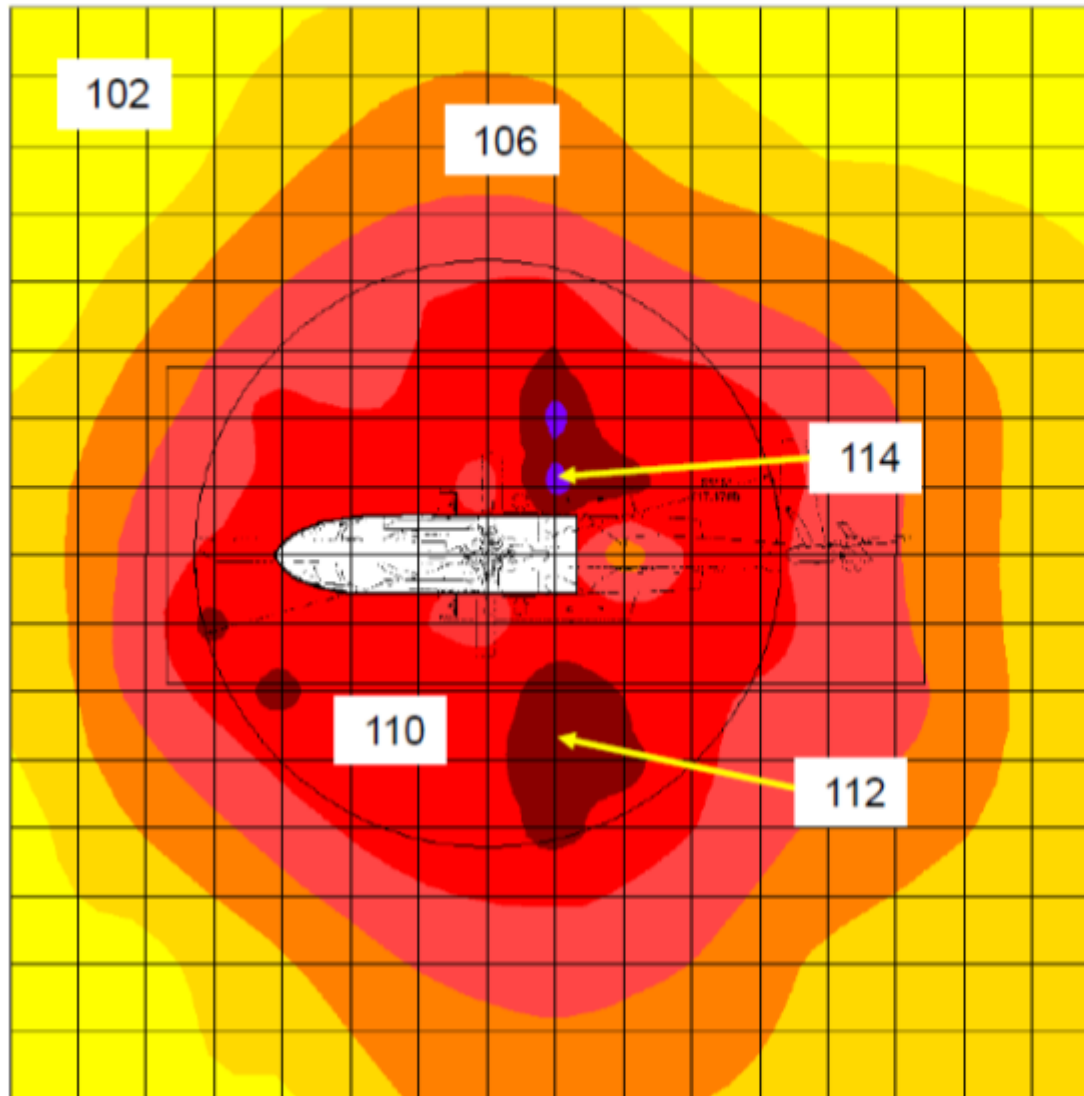


www.safetytools.no

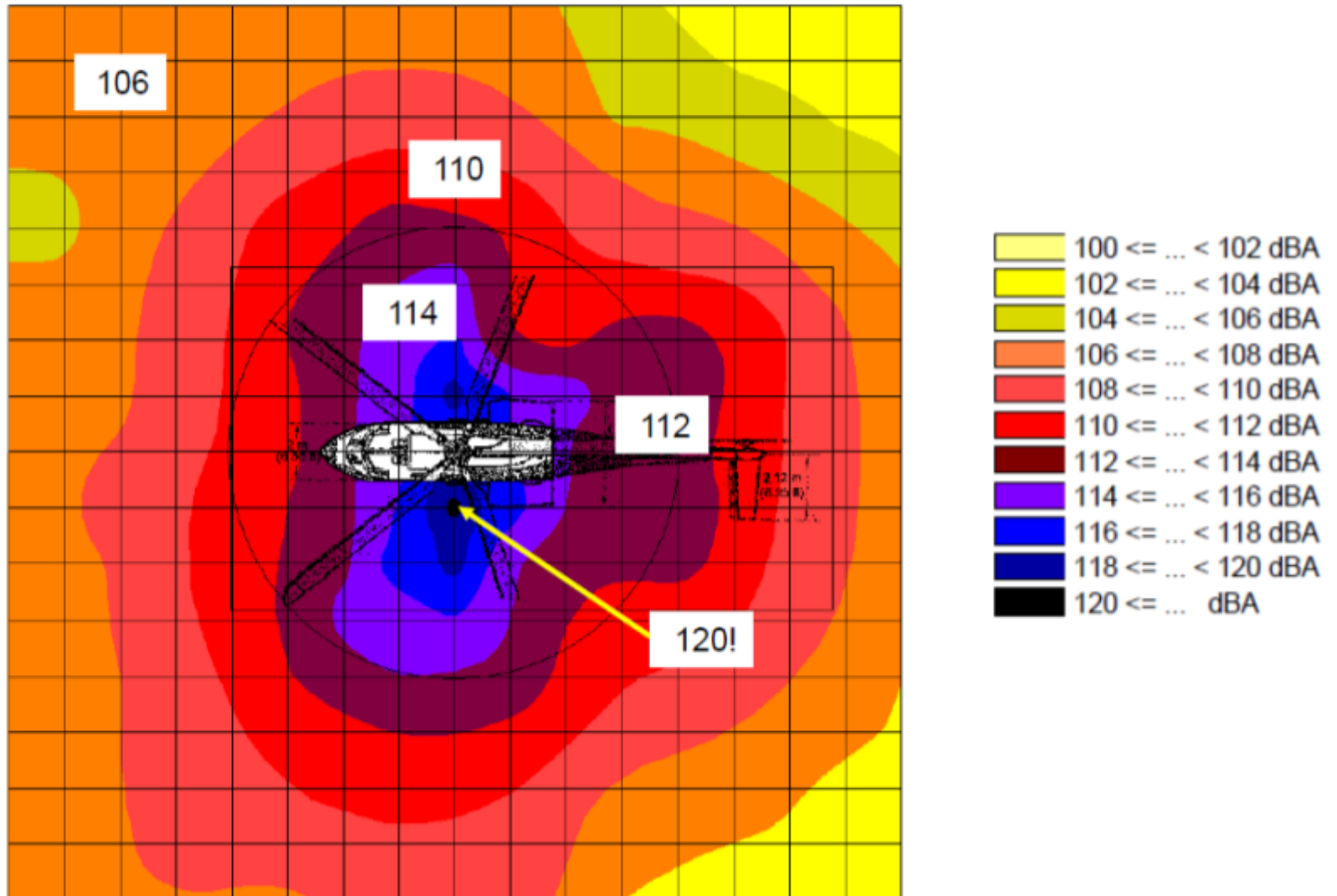
Kartlegging av helikopterstøy



Basis støysonekart : S-92



Basis støysonekart : EC225





TTS (Temporary Threshold Shift)

A scanning electron micrograph (SEM) showing a dense array of hair cells. The cells are elongated and cylindrical, with a rounded, bulbous tip. They are arranged in a regular, grid-like pattern. The background is dark, and the cells are illuminated from the side, creating a sense of depth and texture. The image is in grayscale.

[Http://en.wikipedia.org/wiki/Auditory_fatigue](http://en.wikipedia.org/wiki/Auditory_fatigue)

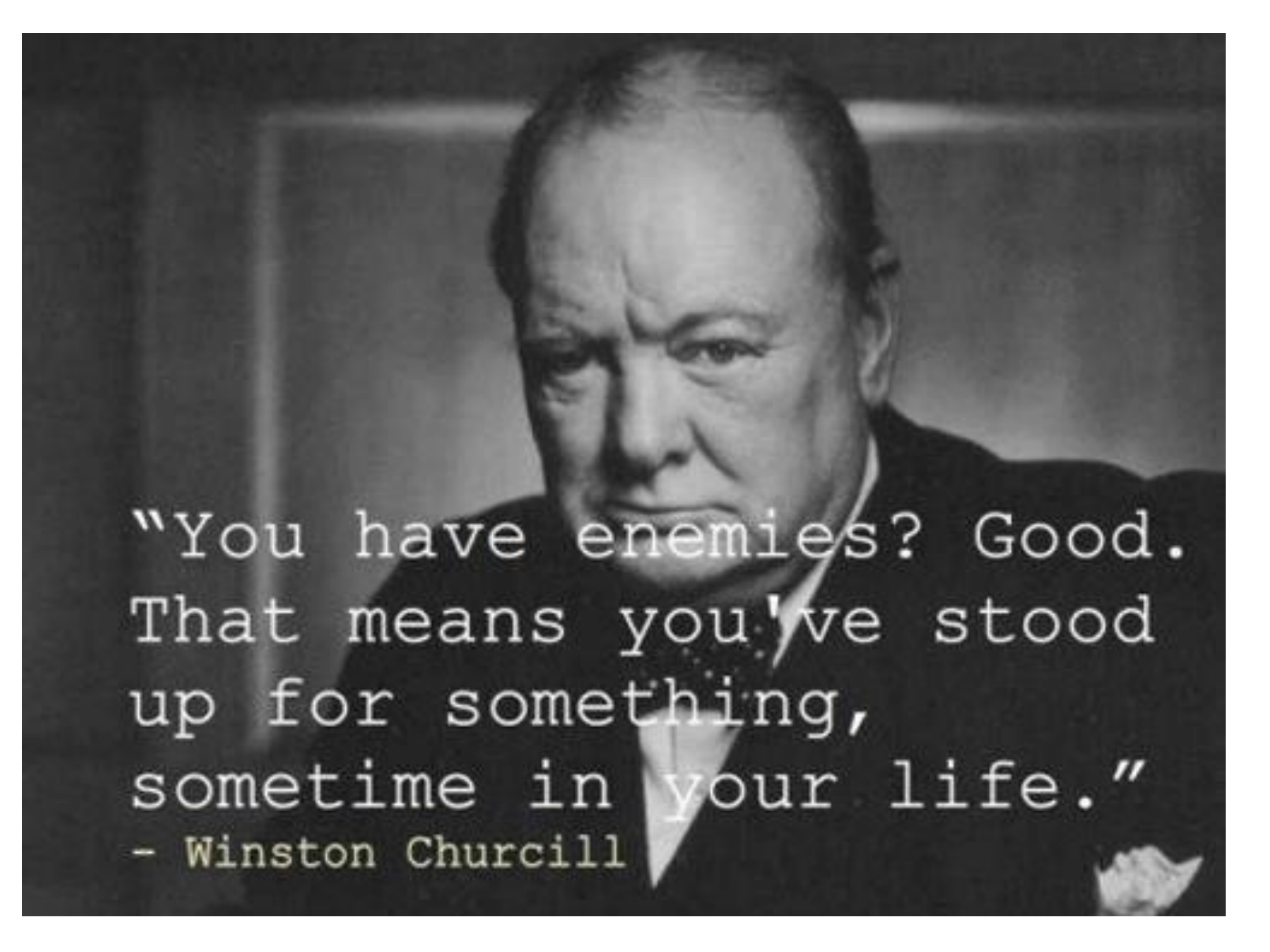
<http://www.nidcd.nih.gov/health/hearing/pages/noise.aspx>

10.0kV 8.1mm x30.0k SE(U) 8/9/2009 10:29

1.00um

Vi kan ikke være ferdig med prosjektet. Vi trenger en fase 2!

- Lavfrekvent ikke håndtert
- Ekstremstøy ikke løst
- Krevende opplæringsprogram må etableres
- Støyprosjektet må behandles i AMU og forpliktende handlingsplaner må etableres
- Prosjekt på Temporært Terskel Skift (TTS)

A black and white portrait of Winston Churchill, looking slightly to the left with a serious expression. He is wearing a dark suit jacket, a white shirt, and a dark tie. The background is dark and out of focus.

"You have enemies? Good.
That means you've stood
up for something,
sometime in your life."

- Winston Churchill

- [Anbefalte lenker](#)
- http://docs.wind-watch.org/Oud_NAG2012.pdf
- <https://www.wind-watch.org/>
- http://oto2.wustl.edu/cochlea/WTPicton_salt_final.pdf
- http://home.kpn.nl/oud/publications/OudM_NAG.html
- <http://www.vmmo.dk/Lavfrekvent.pdf>

