

## U-Fi: 2011

### Universal Wi-Fi and Non-Destructive Testing (NDT)

Universal Wi-Fi is a product developed for Eskom and used in the maintenance of power station boilers.

A device called a NDT device (Olympus) is normally used to measure the wall thickness of the boiler pipes inside the boilers at a power station without the need to cut or dismantle the pipe itself. The NDT devices do not have an OS (Operating System, Linux Microsoft or Android). The idea was to create a device that could take the raw data produced as a result from measuring (ultra-sonic testing which normally is a measured size in mm) and transmit that to a know OS environment thus automating the process. The previous process of taking the measurement, writing it down and then later transferring the same to a team of data captures. This process normally took 3 weeks to have results. The risk with this method was too many errors between the NDT measurer and the scribe. This intern created incorrect maintenance procedures when the tolerance was reported verbally but in actual fact was misheard in the very noising environment of boiler maintenance. U-Fi provides the NDT device an ability to transmit the data directly to a PC (Windows) environment without human error due to noise pollution. Creating an error free environment on the reported value of the tested pipe. The maintenance team could repair the effected pipe without delay. U-Fi gave the maintenance team the ability to bring the boiler back on-line in a shorter time period (6 to 8 weeks down to around 3 weeks back in service)

Project on hold due to Eskom finances on hold: **2015**