

quantity of nickel alloyed with the iron reached 6 per cent., the tensile strength fell to six tons per square inch, whilst the ductility practically disappeared. Contemporaneously the Sheffield College completed a research showing that iron containing about 7 per cent. of nickel had a tenacity of about thirty-nine tons per square inch, with a ductility of about 55 per cent., and that iron with 28 per cent. nickel had much the same mechanical properties: but when about 13 per cent. of nickel was present it formed with the iron a definite alloy possessing the enormous tenacity of nearly ninety tons per square inch associated with a ductility of no less than 45 per cent. The Charlottenburg results were, no doubt, correctly observed, but owing to a preliminary lack of practical metallurgical knowledge the experimentalists made alloys hopelessly charged with oxygen, in fact the title of their research should have been not 'The influence of Nickel on Iron', but rather 'The influence of unknown quantities of dissolved Oxygen on Alloy of Iron and Nickel'.

Another example of Teutonic mendacity is a statement made by a German writer which actually caused some alarm in this country, that owing to the superior skill of the German gun engineer and the better quality of German steel, the comparatively small guns of the German Navy excelled in power the larger British guns.

In connexion with the German realization of 'Der Tag' in the North Sea on January 24, 1915, the artillery experts of Sheffield (which city is the greatest naval armoury the world has ever seen) would no doubt like to ask the survivors of the *Blücher*, the *Derfflinger*¹.

¹ This vessel, the most powerful German battle-cruiser, carried eight 12.2-inch guns.