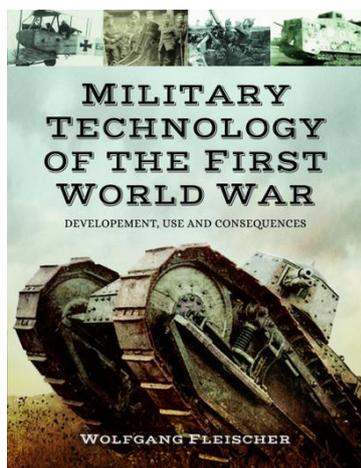


BOOK REVIEW
MILITARY TECHNOLOGY OF THE FIRST WORLD WAR
Development, Use and Consequences
Wolfgang Fleischer
Pen & Sword Military 2017(hb)
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First published in German in 2014 this volume in English followed in 2017 and one can't help thinking how appropriate it would have been if the English version was also published in 2014? However Wolfgang Fleischer is a noted historian with many works to his name. His 1997 book on the Wehrmacht Testing Ground Kummersdorf (which although an artillery range before it became the primary testing ground of the Wehrmacht) is in my view very much a scene setter for this work despite being chronologically after the period of subject of this

review. In all this means that along with his experience working at the Bundeswehr Military Museum, Dresden the author is very well placed to provide what is an excellent volume, from a perspective (German) not often visible to the British reader. It is well known that none of the belligerents were prepared for a long war (indeed volunteers on all sides were concerned the war would be over before they got to the front or at least by Christmas!) Wolfgang Fleischer makes it very clear (like the UK) that Germany was certainly not prepared for a long war in terms of men and material.

The German mobilisation had significant deficiencies in artillery, vehicles and other equipment's with many reserve corps being under strength. The strength and weaknesses of the Schlieffen Plan are well documented and thus Germany lacked the means to achieve a victory. It may be easy to view this as hindsight but this work shows that there were doubts even at the time!

Wolfgang Fleischer illustrates very clearly the problems of a war economy viz production bottlenecks and a shortage of raw materials, extant for all belligerents on the outbreak of war thus 'attrition' and trench warfare was inevitable as neither Britain, France or Germany had sufficient mass and materials to overcome their main enemy thus stalemate was the result! With cogent references to earlier conflicts such as the Franco-German War 1870-71, the Russo-Turkish War 1877-78 and the 1904-05 Russo-Japanese War – many of the various 'staffs' were aware that warfare had changed, for example the

length of these wars and the high rate of ammunition expenditure had certainly been noted but in terms of what today we would call 'Op Tempo', strategic reserves and resources and the mobilisation of industry and the civilian population, the creation of a 'Nation in Arms' was barely understood.

Having set the context the various technological developments of the war starting with the Machine Gun are discussed in great detail. It is argued that the Machine Gun decisively influenced tactics and that other weapons such as Flamethrowers, Hand Grenades, Mine Throwers, Infantry Weapons and Artillery (in terms of quality, quantity, variety of calibres and the ever-increasing scale of bombardments), Armoured Vehicles (e.g. The Tank) and Chemical Warfare were created to overcome the effect of the Machine Gun. Eclectic but no less important his chapter on Geology in the context trench warfare acknowledges that although trench warfare was not a new concept the 'failure of mobility' made geology a very important factor in the construction of trench systems, communications lines and a whole range of various shelters and dugouts and artillery and mortar positions. It is notable that with the advent of the Tank the construction of 'Tank Traps' is discussed. (Geology and terrain are also of great importance to the operations of tanks!).

The detailed narrative on mining both offensive and defensive, despite the volumes already available is of interest to both the general and specialist reader. The rise of artillery and improvements in associated equipment is superbly covered charting the progression from infantry support to target neutralisation and destruction and 'clearing the way' with heavy artillery supporting the light (aka field) artillery with the major change of the 'doubling of field artillery and the three-fold increase in heavy artillery, a decisive factor in the so called 'material battle'. The narrative on 'The Road to Cambrai' provides the reader versed in the standard narrative of the Battle of Cambrai an interesting alternative but no less relevant perspective. Chapters on Chemical Warfare (aptly sub titled 'The Science of Pure Annihilation') is another detailed treatise of the development of Chemical Warfare as are chapters on Flamethrowers (early versions as dangerous to the operator as the target!) and the development of the German Airforce. This work is a 'Tour de Force', a showcase of detailed research with statistics to rival the British 'Statistics of Military Effort'. There is much in this well illustrated work for both the general and specialist reader with more than a passing interest in the Great War. A very highly recommended addition to historiography of the First World War.

Martin Willoughby