Pioneering in Steel Casting: A Melter’s Reminiscences, *ca* 1856-70s
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Introduction

We have little direct, first-hand information from the shop-floor concerning the pioneering days of steel manufacture. To be sure, a number of foreign ‘travellers’ or industrial ‘spies’ have furnished us with detailed accounts of contemporary technology, but few of these were written by practising steelmakers. Not surprisingly, the latter, as relatively unlettered men, left virtually no detailed accounts of how steel was melted in the 19th century.

The following document (extant in the Hadfield papers in Sheffield City Library Archives) is therefore especially interesting. It was written on 6 May 1895 by John Mallaband (1831-97), in response to a request from Sir Robert A Hadfield (1858-1940), the Sheffield steelmaker, for an account of the early days of his company. Mallaband, as he states at the beginning of the letter, began his career as a crucible melter at the Sheffield firm of Vickers, before joining Hadfield’s father — also named Robert — in establishing Hadfield’s Steel Foundry at the Hecla Works, Attercliffe, in 1872.

The letter documents the trials and tribulations of a specialised branch of crucible steel manufacture — steel casting. The art of founding was an old one, but the production of steel castings (a logical outgrowth of the Huntsman crucible process) only began in earnest in the early 19th century. In 1824 one of the earliest patents for steel casting was registered in England by Frederick H W Needham (1831-97), in response to a request from Sir Robert A Hadfield (1858-1940), the Sheffield steelmaker, for an account of the early days of his company. Mallaband, as he states at the beginning of the letter, began his career as a crucible melter at the Sheffield firm of Vickers, before joining Hadfield’s father — also named Robert — in establishing Hadfield’s Steel Foundry at the Hecla Works, Attercliffe, in 1872.

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