Literary Evidence for Crucible Steel in Medieval Spain
Mattias Karlsson Dinnetz

ABSTRACT: This work evaluates Andalusí Arabic (Hispano-Arabic) and Romance (early Castilian) literary evidence for the previously unknown use, working and production of crucible steel in medieval Spain between the 10th and the 13th centuries AD. No evidence has to date been presented indicating that the inhabitants of medieval Spain were producing or working, or even that they were familiar with, steels of crucible origin. In presenting the first evidence for this, the present paper significantly contributes to furthering our knowledge concerning early Islamic ferrous technology.

Introduction

The aim of this paper is to assess the evidence for crucible steel in medieval Spain, through the analysis of textual sources. Indications of iron and steel occasionally occur in the Andalusi Arabic and Romance literature, but to date no study has been aimed at investigating the metallurgical significance or general informative value of this evidence. The examination of particular terms and their contexts has now provided relevant information concerning the use, working and production of crucible steel, and at times additional details concerning working and/or production sites can also be derived. Frequently, however, the literary sources only confirm that there was familiarity with crucible steel in medieval Spain.

In the past, it appears to have been a general notion that knowledge and use of crucible steel existed in the early Islamic world as a whole. In fact there are still many Islamic regions that have not been submitted to in-depth study, so it cannot be taken for granted that all peoples under Muslim rule were familiar with—or were using—crucible steel.

At the outset, it is important to mention a number of speculative statements in relation to crucible steel in medieval Spain, which, up to the present, have been the only—and furthermore unsubstantiated—published material. A number of authors (e.g. Forbes 1957, 57; Calvo 1964, 53; Lombard 1971, 178; Glick 1979) have claimed that crucible steel was imported to, and used, worked and produced in Islamic Spain, without presenting any early literary or physical evidence in support. It was therefore necessary to examine primary, contemporary literary sources more closely for evidence for crucible steel.

The term ‘Indian’ in early literature will be discussed first; then written indications for crucible steel in Andalusi Arabic and Romance literary sources will be examined. The textual evidence is grouped together according to the nature of the information it provides.

The Term ‘Indian’ in Early Literature

The Arabic term al-hind (Indian) and the interpretation of its significance are central to the present work. Earlier research has suggested that al-hind, and variants such as muhammad, hindiyya, and hinduwânî, referred to steel.