

## ملخص البحث رقم (٤)

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### ABSTRACT

Repeated restoration and maintenance works are considered innate, since ancient times. As a result of exposing the archaeological materials to use or occupation and due to the effects of physical aging and environmental factors, recurrent restoration was inevitable. These works were performed by using the local materials and the same technological methods, taking into account the improvements at that era.

The deteriorated parts in the doors were explicitly concentrated at the bottom parts, resulting from relative humidity and the friction effect during the daily activities. This paper discusses previous restorations of the ancient doors at Nalut Palace by metal straps, plates and fixings that are deemed a unique technique for strengthening and conservation of ancient doors.

The goal of these restoration-conservation works of ruined archaeological materials, is to recover the missing properties, and to preserve their historical values for a long time. Old restorations are not considered a scientific technique under the international standards. Nowadays, they are not a failure work in the past. Rather, they are a part of its own history.

X-Ray fluorescence was used to determine the composition of metallic plates that were manufactured from iron and iron overlaid by zinc. These plates were not fixed by welding or by any chemical materials, but they were fixed by mechanically joined. Thus, previous restorations did not cause unexpected effects on physical and chemical properties, or the wood composition.