

Conservation of mosaic floor detached from Yasileh site in northern Jordan

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Introduction :-

Since about 22 years ago, very beautiful mosaic floors had been uncovered in Yasileh churches in northern Jordan (Figure 1). For protecting these floors from vandalism and other natural factors, the decision had been taken to detach these floors from the site and to lay them over on Portland cement. The panels were displayed on the walls of the Jordanian Heritage Museum -Yarmouk University, Jordan (Figure 2) .



Fig 1

Figure (1)- Explains the mosaic floors in Situ



Fig 2

Figure 2 : The floor displayed on the wall of the Jordanian Heritage Museum

Statement of Problem :-

The problem resulted from the heavy layer of Portland cement background; this affected the floor in different aspects: mechanical, chemical, physical, and aesthetic deterioration . Figure (3)



Fig 3

Figure (3) –shows different forms of deterioration which affected the mosaic floor

Conservation Methods

A-After accurate documentation of the tessellated layer of mosaic floor by using drawing technique 1 : 1 which applied on Non-perishable tracing paper . Animal glue and wood glue has been used to stick double pieces of cotton cloth on the surface of the mosaic floor,to preserve the tesseraes from loosing through removal of the layer of cement..(Figure 4)



Fig 4

Figure 4 –shows gluing the surface of mosaic

B-All the Portland background cement is divided into pieces, each 4 cm x 4 cm,(Figure 5,6)



Fig 5



Fig 6

Figure 5,6:-shows dividing of the back Portland cement by using cutter of marble

C- Complete removal of the Portland cement layers and Iron bars from the reverse side of the tesseraes by using different mechanical tools. Figures (7, 8)



Fig 7



Fig 8

Figure 7,8 :- shows dividing and removing of the backed cement and iron bars

D-Preparation of the honeycomb of the lightweight panel in the same dimension and to get rough surface, small gravel glued on the honeycomb by using epoxy resin. (Figure (9,10)



Fig 9



Fig 10

Figure 9 -10:- shows honeycomb light panel used as supporter

E –New mortar prepared to adhere between the reverse side of the floor and the rough surface of the honeycomb. The mortar consists from the following ratios : Brick powder 1, Silica 1, hydraulic lime 1, and marble Powder 1. All four ratios were mixed with water solution which has 8 % of wood glue. Figure (11)



Fig 11

Figure 11 :-shows the adhesive layer of the mortar between the honeycomb panel and revers side of the mosaic floor.

F-Removal of the cotton cloth that covered the mosaic surface by using warm water, then using different mechanical techniques to clean the surface from deposits. Figure (12) .



Fig 12

Figure 12:-shows removal of cloth from the surface of mosaic floor .

G-Reconstitution of the surface : New layer of liquid mortar was applied to fill the joints among tesseraes; it contained the following materials and ratios: Marble Powder 1 , Brick Powder 1, pozzolana 1, and (Lafarge)-Hydraulic Lime 1. Figure (13)



Fig 13

Figure 13 shows spreading out of the liquid mortar on the mosaic surface

H-Surface protection: surface protection layer consists of 1, 5% of acrylic resin (Paraloid B72) solved in acetone was applied by brushing Figure (14)



Fig 14

Figure 14 shows applying the protection layer on the mosaic surface

I-Finally , the mosaic floor was placed in a new wooden frame, and is currently being displayed in a proper surrounding environment inside the Jordanian Heritage Museum -Yarmouk University (Figure 15) .

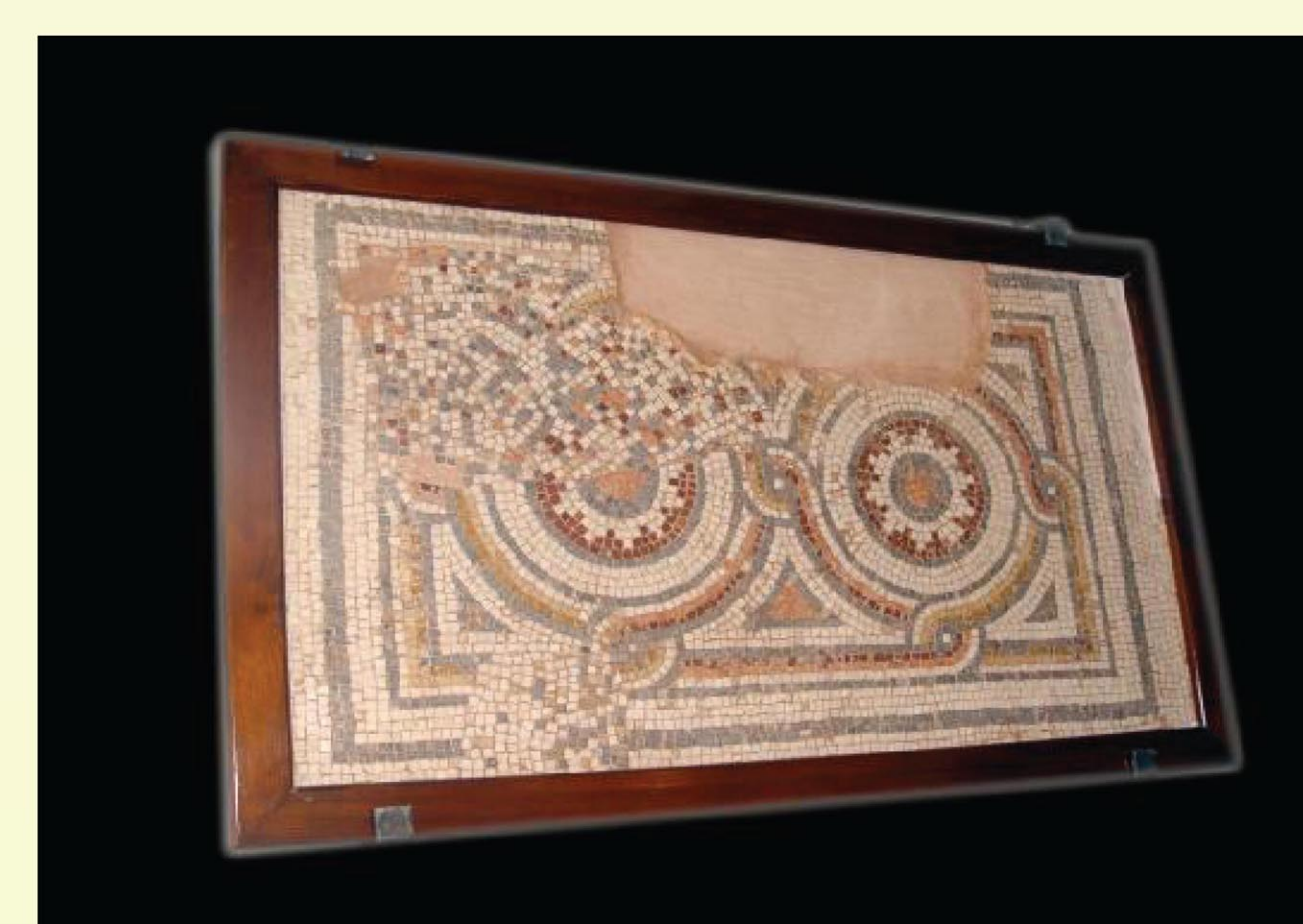


Fig 15

Figure 15 :- shows the final case of the mosaic after conservation