

Abstract

Rocky inscription that is the main subject of this article, has been incised on a rock in Pire Ghar area, at Deh Cheshme village, in the command of the leaders of constitutional revolution. Current situations and maintenance conditions of this memorial is not so good, but according to the historical and cultural values of this inscription, the exact study and research on it is very important. The erosion of Pir Ghar inscriptions that have been exacerbated by superficial streams, has destroyed a remarkable part of these inscriptions. Existing of these historical and cultural values has increased the necessity of the protection of these inscriptions. According to topography and fields studies, this inscriptions have been destroying by superficial streams and glacial. And in reality, water is an important factor for this destruction directly and indirectly and even, water makes the other factors influence over these inscriptions too. We can observe superficial streams in close relationship to geographic situations; among the most important superficial sources, snow, atmospheric landslides on the top of mountains, seasonal streams on gradient surfaces that ending to inscription, and glacial at cold season are the most important factors that make erosion and have serious damages on these inscriptions. This article is going to seek two important purpose: pathology and finding protective strategies on Pir Ghar inscriptions. For getting this purposes and for technical recognition and also pathological studies, it was used systematic analysis (XRD, EDS, ATR /FTIR and topography studies). And then by using field surveys and the tools such as GIS and RS, the place of the inscriptions were identified. According to systematic analysis XRD, it was determined that the type of the rocks, that inscriptions are on them, is Calcium carbonate. And also, according to EDS, the ink hat have been incised on rock is carbonate. There is a brown stain on inscription that is caused by spreading the ink strain by water and melting putty materials in the cracks of inscriptions. Again, according to EDS analysis the type of this ink is Carbon. In topography studies on observed and thin section, there is no porosity in this case and the existing cracks have been accumulated with Calcite and Iron oxide. By using geographical information system we get some findings such as altitudinal numerical model, slope, slope direction, water direction density, basins, the place of stream channel, and water direction. According to this information, drainage models (channels and tubes) and changing the water direction was suggested for maintaining of rocky inscription and controlling superficial water sources. These models prevent superficial sources streams, runoffs, atmospheric variations, and melting the snow in the top of the mountains. And at the end for protecting the place of inscription against the runoffs, using a metallic shield and rainspout was suggested.

Key Words: Conservation, pathology, Rock inscriptions, Mashrutiat, Pir Ghar, Chaharmahal and Bakhtiari