Application of the Mobile Phone for Occupational Self-Inspection Program in Small-Scale Industries

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Abstract : In this study, an integrated approach of Google Spreadsheet and QR code which is free internet resources was used to improve the inspection procedure. The mobile phone Application（App）was also designed to combine with a web page to create an automatic checklist in order to provide a new integrated information of inspection management system. By means of client-server model, the client App is developed for Android mobile OS and the back end is a web server. It can set up App accounts including authorized data and store some checklist documents in the website. The checklist document URL could generate QR code first and then print and paste on the machine. The user can scan the QR code by the app and filled the checklist in the factory. In the meanwhile, the checklist data will send to the server, it not only save the filled data but also executes the related functions and charts. On the other hand, it also enables auditors and supervisors to facilitate the prevention and response to hazards, as well as immediate report data checks. Finally, statistics and professional analysis are performed using inspection records and other relevant data to not only improve the reliability, integrity of inspection operations and equipment loss control, but also increase plant safety and personnel performance. Therefore, it suggested that the traditional paper-based inspection method could be replaced by the APP which promotes the promotion of industrial security and reduces human error.

Keywords : checklist, Google spreadsheet, APP, self-inspection
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