

A Study on Design of the Civil Defence Uniform

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I. Introduction

Civil defense is the protective activity against natural disasters, massive fires, explosions etc under the plan of government. The civil defense system has been enforced in Korea on 1975 and the civil defenders wear civil defense uniform at the time of civil defending actions. Before the year 2005, the color of civil defense uniform was light brown for both top and bottom and there was no change to it for decades. Therefore it is necessary to create more modern design and the color to convey new image which adapt changing social and economic values.

The purpose of this research is to develop the civil defense uniform which has appropriate symbolization of civil defense of the country and improved functionality and esthetics. Also it is to help re-recognize the role and the function of the civil defense in order to have more active civil defense through the improved uniform.

II. Design Concept of Civil Defense Uniform

There are many factors to be considered when designing functional uniforms and in the case of the civil defense uniform, it is necessary to consider functionality, symbolization, esthetics, management, and economics.

Design elements such as line, form, color, and material have to be adequately used. Colors that are mostly used for uniforms such as gray and navy have low reflexivity which makes those colors difficult to be distinguished among near environments. Therefore it is desirable to use colors with high visibility at the easily noticed areas. It is effective to use details such as design line, pockets, collar, and cuffs.

The functionality is divided into the kinetic and the physiological function. The uniform should not interrupt any actions and be suitable to body movements. For symbolization, emblem should be used in the effective way. Esthetics in addition to functionality is an important matter to be considered. Therefore design and colors which accord with civil defense uniform need to be selected and it also should be designed with fashion and esthetic sense.

III. Research Method

The questionnaire method was done to survey satisfaction and design request about current civil defense uniform. The subjects were 285 men and it was done from April 6 to 7, 2005. 10.2% of the subjects were satisfied with the current color and 56.8% were unsatisfied, 9.5% of the subjects were satisfied with the current style and 55.5% were unsatisfied. Therefore the unsatisfied were a lot more in number than the satisfied.

12 sets of designs and 20 sets of color variations were produced for the development of the civil defense uniform. Each set had illustration, design explanation, flat sketches, swatches, detailed swatch contents, and swatch price. The items for each set were jacket, pants, winter jumper, cap, sneakers, and buttons for men and women.

The judging panel consisted of 10 professionals executed judgment about the designs. 5 sets of top and bottom were produced according to the result of the first judgment.

The lime color and the mustard color were selected among the first 5 sets of produced samples. Three styles with these two colors were produced which make total of 6 jackets and pants according to the result of the second judgment. In addition to that 3 winter jumpers, 4 caps, and 3 sneakers were produced. The designs were revised by 5 more judgments and evaluations of samples from May 17 to June 29, 2005.

To use as a reference for design decision, the questionnaires were used to survey preference about actual samples. They were conducted 5 times from May 18 to June 10, 2005 and the subjects were 761 civil defenders and public officials who were from Seoul, Cheonan, and Daegu.

IV. Results

New design of the civil defense uniform was determined on the ground of judgment and preference survey. It included jacket, pants, winter jumper, cap, and sneakers of man and woman.

First, the characteristics and the merits of the jacket and the pants are as below.

① The colors of jacket and pants are lime. As the lime color is yellowish the color gives bright and cheerful image. Also, it is well recognizable color that it is easy to guide civilians in case of emergency. ② The double pockets at the bottom of the jacket have high functionality through its convenient and fast placement of hands on the inside of pockets and the stability with important items on the inside. ③ The zipper pockets on the chest is more convenient than the buttoned pockets. ④ The pleats on the back have high functionality when the back is bent. ⑤ The zipper on the center front makes convenient to wear and take off the jacket quickly. ⑥ The cuffs on the sleeve makes it easy to adjust the sleeve length according to the arm length. ⑦ T/C (polyester and cotton) fabric is highly practical because of excellency in its air-permeability, hygroscopicity, durability, and less wrinkles. ⑧ Embroidered civil defense emblem makes symbolization and esthetics higher.

Second, the characteristics and the strengths of the winter jumpers are as below.

① The indigo color of winter jumper conveys stable and professional image for both men and women. ② The style follow the recent trend of mountain-climbing wears which makes high in fashionability and esthetics. ③ The double pockets with zipper on the front bottom and the zipper pocket on the left chest have an ability of stable placement of items inside which gives high functionality. ④ The front opening can be worn in different ways. During the normal days it can be worn as wing collar with its collar area opened and when the weather is cold it is possible to zip up the opening all the way to the neck which keeps it warm. It is also possible to improve warmth by fastening the bottom hem with the stopper and the string. ⑤ The zipper and the dot button on the center front makes it convenient to wear and take off the jacket. ⑥ It has high warmth because of the quilted lining with polyester insulation. ⑦ The cuffs on the sleeve makes it easy to adjust the sleeve length according to the arm length. ⑧ The length of the jumper covers up to half way of hip which gives good warmth and activity. ⑨ The fabric is polyester with fine structure which has high durability and good utility.

Third, the pants used the same fabric as the jacket and the silhouette is loose straight style with the front hip pockets on both right and left front and the welt pockets on both right and left back.

Fourth, the cap used the same fabric as the jacket. The emblem of the civil defense was placed in the front of the cap and word 'civil defense' was embroidered on the left side. The shoes used olive green synthetic leather and it is sneaker style with projections on the outsole.

The new civil defense uniform was made public on August 1, 2005 under the regulations of the Ministry of Government Administration and Home Affairs. There has been improvement image of civil defender by higher functionality, utility, symbolization, and esthetics of the uniform.