

Testing and Comparison of Type III Camouflage Suit Effectiveness

Several types of camouflage suits produced by our company (styles shown in the image below), including Type I, Type II, and Type III, have undergone preliminary testing. For Type I, after 15 minutes outdoors, the thermal image spots began to expand, and the human thermal outline became increasingly clear. Even using crouching or crawling positions, the suit did not achieve the desired effect of disrupting the human outline or blending with the background through different infrared emissivity patches. Additionally, the face, chin, and hands of the wearer were not effectively covered, with thermal red spots remaining particularly prominent."



Based on the test tracking, we promptly took the following actions: first, rechecked the issue of thermal image spot expansion in the camouflage suits; second, improved the camouflage suit design and developed a new Type II camouflage suit with an optimized structure; third, verified the effectiveness of the improvements made to the Type II structure camouflage suit.

The rechecking method involved conducting a 30-minute continuous test with the old model camouflage suit, while simultaneously comparing it with the new structure camouflage suit. The resulting thermal and visible light images are shown in Figures 1 and 2.

It can be observed that after 30 minutes outdoors, the thermal outline of the old model camouflage suit is very prominent. In comparison, the Type II structure camouflage suit shows significant improvement, though there are still some localized thermal features on the head, shoulders, and chest.



Figure 1: Reinspection Results Photo(after)



Figure 2: Reinspection Results Photo(before)

1. The effectiveness test of the improved Type III camouflage suit concluded that it completely overcame the previous shortcomings. During nearly one hour of continuous outdoor testing, the thermal outline remained largely unchanged.

Test Method: The improved new camouflage suit was compared with the client's camouflage suit. Thermal images were obtained every 15-20 minutes to observe changes in the thermal images. See Figures 3-6. Over a duration of 57 minutes, the thermal outline of the body showed minimal changes, with a noticeable improvement compared to the client's camouflage suit.

Figures 7 and 8 show a comparison of the back features after 57 minutes. Except for very slight localized heat on the shoulders, the back features were mostly eliminated.

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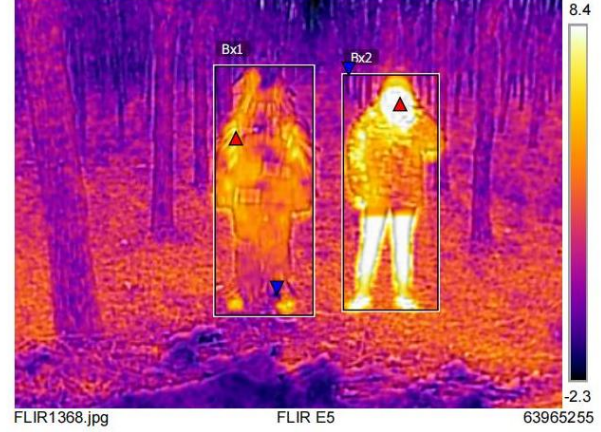


Figure 3: Test at beginning

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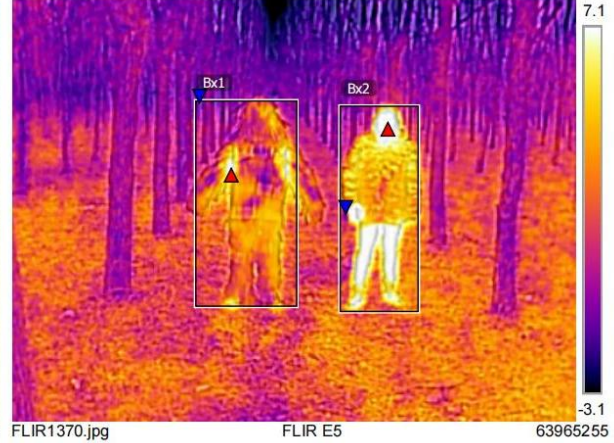


Figure 4: Test at 19 Minutes

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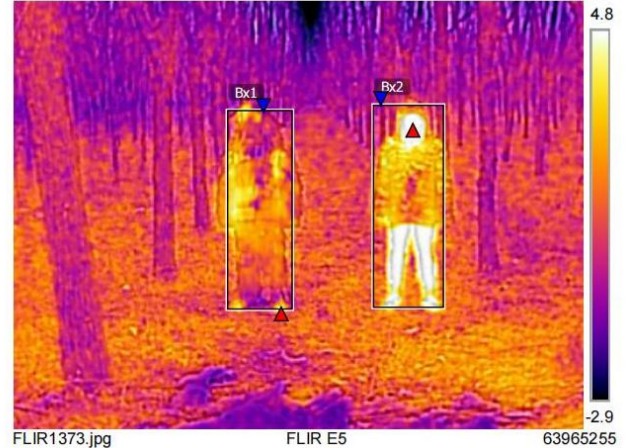


Figure 5: Test at 37 Minutes



Figure 6: Test at 57 Minutes



Figure 7: Back Features at the Start of the Test



Figure 8: Back Features at 57 Minutes into the Test

2. Although this new type of camouflage suit shows significant effectiveness, it does impact soldiers' running and jumping during combat, making it more suitable for use in a concealed or stealthy state.

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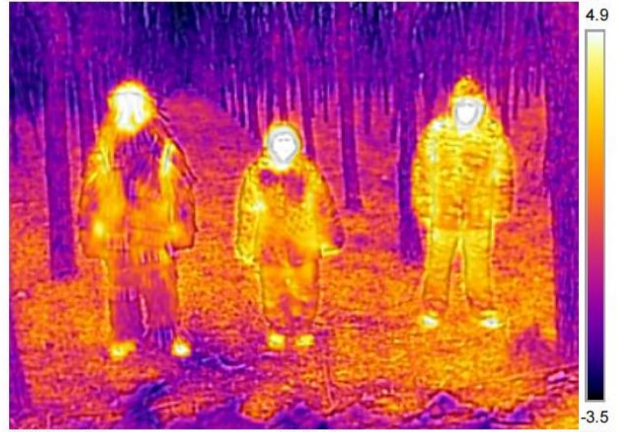


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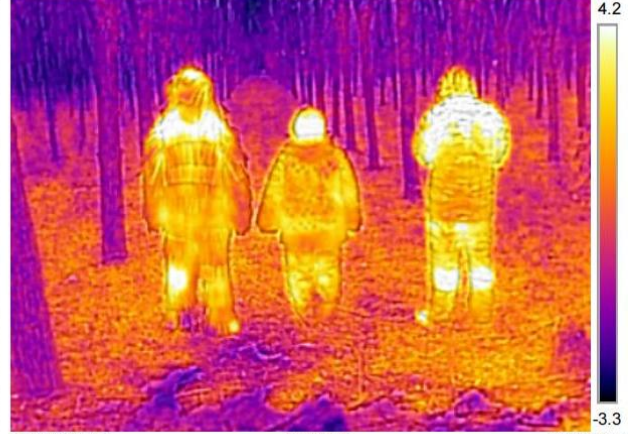


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