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**A Weldable Precoated Stainless Steel "WELCOLOR"**

Noboru Kinoshita, Ryuichi Hasegawa, Takeshi Koga, Isamu Takasaki, Yasumitsu Oodera, Motoshige Yamada

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**Synopsis :**

A weldable pre-coated stainless steel sheet, WELCOLOR, has been developed to make it possible to use water proof techniques in electric resistance welding. The paint to obtain electric conductivity between the electrode of the welding machine and the steel sheet and the method of top coating have been studied on the technological basis of RIVERLITE COLOR<sup>®</sup>, a high grade prepainted stainless steel sheet, which have been in production for roof and exterior usage. WELCOLOR was launched into the market together with RSW technique, a system also developed by Kawasaki Steel in 1983 to buildup water-proof roofs by welding. This report outlines the performance characteristics of WELCOLOR.

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**The body can be viewed from the next page.**

## A Weldable Precoated Stainless Steel "WELCOLOR"\*



Noboru Kinoshita  
Staff Assistant  
General Manager,  
Production, Quality &  
Technology Sec.,  
Stainless Steel Dept.,  
Hanshin Works



Ryuichi Hasegawa  
Staff Manager,  
New Metal  
Materials Dept.,  
Hanshin Works



Takeshi Koga  
Staff Assistant  
Manager, Production,  
Quality & Technology  
Sec., Coated Products  
& Shapes Dept.,  
Hanshin Works



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A weldable pre-coated stainless steel sheet, **WELCOLOR**, has been developed to make it possible to use water proof techniques in electric resistance welding. The paint to obtain electric conductivity between the electrode of the welding machine and the steel sheet and the method of top coating have been studied on the technological basis of **RIVERLITE COLOR**<sup>®</sup>, a high grade prepainted stainless steel sheet, which have been in production for roof and exterior usage.

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superior to other welds in the welding operation on the roof and in the reliability of joints of thinner gage material. In order to apply resistance welding to precoated stainless steel, it is required to coat the paints having

two-coat-two-bake precoated stainless steel\*<sup>1</sup>  
with film containing iron phosphide particles

Top coat variables

Welding variables

Spot

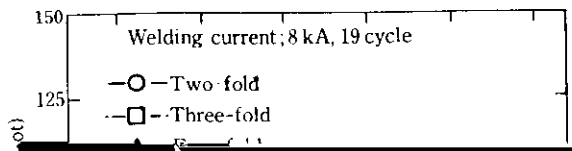
Table 2 Mechanical properties of WELCOLOR

Table 4 Performance characteristics of dry film on WELCOLOR-P tested for 300 h with

Table 5 Performance characteristics of post coat film\*  
on WELCOLOR-P

resin paint should be so sprayed or brushed as to be  
about 40  $\mu\text{m}$  thick in dry condition.

The changes in color tone and gloss retaining rate



along the diameter of the nugget obtained under electrode force of 250 kgf/cm<sup>2</sup>. All of these welded pieces prove also from structural aspect that these joints are satisfactory.

To verify the examination of the top of electrode by

sheets are in contact with each other and those as the bottom (uncoated) surfaces of two sheets are in contact

