**Predicting Service Life of External Wall Painting for the School Buildings in Indonesia**

Peter F Kaming1[0000-1111-2222-3333] and Zofar S.C. Sihotang2[1111-2222-3333-4444]

1,2 Universitas Atma Jaya Yogyakarta, Yogyakarta 55281, Indonesia  
lncs@springer.com

**Abstract.** Service life in accordance with ISO 15686:2008 as a period of time after construction in which the building and its materials are the same or exceed the minimum performance requirements. Service life is needed for the building operation and maintenance. If routine maintenance and repairs is carried out properly, it would provide building durability and minimize building maintenance cost in the long run. This research was conducted to determine the service life of paint works from various brands on the market applied in the school buildings in Indonesia. The data used in this study were obtained directly from the building maintenance officers. Authors did some direct observation accompanied by the officers, take photos of damaged walls and measure the area of ​​the external walls. Data obtained are grouped according to degradation level by using regression curves. The results of the data analysis obtained the higher square of determination in the four orientations of the building. Degradation of services in external wall are proportional non linear to the age of the paint work. In general, the appearance of a paint in an external building would decrease along with its age. The level of degradation due to type of damage such as dirt, cracks, bloating and peeling of the paint on wall. The study suggests that service life for external wall paint for the school buildings on maximum 5 years.

**Keywords:** age of paint, degradation, maintenance, service life, Indonesia.