PV 모듈용 EVA Sheet의 Lamination 공정 조건에 따른 태양전지 크랙발생 현상 관찰

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The observation of solar cell's micro-crack depending on EVA Sheet's lamination condition for photovoltaic module

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Abstract: Recently, the thickness of solar cell gets thinner to reduce the quantity of silicon. And the reduced thickness make it easy to be broken while PV module fabrication process. This phenomenon might make PV module's maximum power and durability down. So, when using thin solar cell for PV module fabrication, it is needed to optimize the material and fabrication condition which is quite different from normal thick solar cell process. Normally, gel-content of EVA sheet should be higher than 80% so PV module has long term durability. But high gel-content characteristic might cause micro-crack on solar cell. In this experiment, we fabricated several specimen by varying curing temperature and time condition. And from the gel-content measurement, we figure the best fabrication condition. Also we examine the crack generation phenomenon during experiment.