

The Hazards of the Mud

The mud accumulates as an angle or belt above the bottom frame of the module. Even be cleaned frequently, the mud still can grow up between two cleanings, especially on those modules which tilt angle is lower than 15° , or the tracking solar plants.

1. The mud covers some area of the solar cell, which leads to a loss of the module power (not only the cell). Normally such loss will be more than 10%.

2. When the solar cell is covered by such mud, its temperature will rise up, this is so called "hot spots" phenomenon of the solar module. In most cases, the temperature of the covered cell will be at least 20°C higher than it on other cells.

2.1 Such higher temperature will cause a power loss of the module.

2.2 Since such mud always occurs on the same position, the high temperature also happens on the same place. Such long-time high temperature will accelerate the ageing of the module to shorten the lifetime of the module, and even cause a fire in severe condition.

3. When the remained water, together with the mud is always existing on the module, it reduces the module's insulation resistance largely after raining, which is more likely to cause a PID problem, that is, potential induced degradation. Such PID may cause a power loss up to 60%. This is an even more serious problem of reducing power output than the mud itself.

And such remained water, mud will also help the growth of moss and other moss like plants.