

## ABSTRAK

PROPER adalah evaluasi ketaatan perusahaan dan/ atau kegiatan di bidang pengendalian pencemaran dan/ atau kerusakan lingkungan hidup. Ada sembilan kriteria penilaian PROPER HIJAU dan PT XYZ ingin meraihnya pada tahun 2020. Permasalahannya, PT XYZ belum memenuhi kriteria penilaian tersebut. Untuk mengidentifikasi penyebab dan usulan perbaikannya digunakan pendekatan DMAIC. Pengukuran total partikulat udara ambien tahun 2015 – Q2 tahun 2018 di area masyarakat terdapat 26 sampel dan area perusahaan terdapat 66 sampel melebihi kriteria PROPER HIJAU. Untuk area masyarakat, disebabkan karena proses operasi di *open/ close yard blast furnace plant* dan *slag yard steel making plant* yang belum dilengkapi *dedusting system* dan jaraknya dari masyarakat sekitar  $\pm 200$ , pendinginan *KR Slag* kurang dari 28 jam dan faktor cuaca. Untuk area perusahaan, karena pengangkutan *material*, penyimpanan *material*, kurang optimalnya *dedusting system*, proses operasi di *open/ close yard blast furnace plant* dan *slag yard steel making plant* yang belum dilengkapi *dedusting system*, belum terjadwalnya *maintenance* rutin, pengadaan *sparepart* yang membutuhkan waktu lama, konstruksi jalan, kondisi cuaca dan intensitas kendaraan. Program perbaikan yang dilakukan antara lain penyiraman jalan, penutupan *raw material* di *open yard* dengan terpal, inspeksi kondisi *dedusting system*, pembatasan jumlah dan kecepatan kendaraan, serta penghijauan. Hasil pengukuran total partikulat udara ambien setelah perbaikan, di area masyarakat seluruhnya memenuhi kriteria dan di area perusahaan terdapat 10 sampel belum memenuhi kriteria PROPER HIJAU.

**Kata kunci:** DMAIC, PROPER HIJAU, Diagram Pareto, *Fishbone* Diagram, *Action Planning for Failure Mode* (APFM)

## ABSTRACT

*PROPER is an evaluation of company compliance and/ or activity in the field of pollution control and/ or environmental damage. There are nine criteria for GREEN PROPER assessment and PT XYZ wants to achieve it in 2020. The problem is that PT XYZ has not fulfilled the assessment criteria. To identify the causes and proposed improvements, the DMAIC approach is used. The total particulate measurement of ambient air in 2015 – Q2 in 2018 in the community area there are 26 samples and the company area 66 samples exceeding the GREEN PROPER criteria. For community area, it is because the operation of open/ close yard blast furnace plant and slag yard steelmaking plant that have not been equipped with dedusting system and the distance from community around  $\pm 200m$ , cooling the KR slag less than 28 hours and weather factors. For the company area, due to material transport, material storage, less optimal dedusting system, the operation process is open / close the yard blast furnace plant and slag yard steel making plant that has not been equipped with a dedusting system, routine maintenance schedule, spare parts procurement takes a long time, road construction, weather conditions and vehicle intensity. Improvement programs include road watering, closure of raw material at open yards with tarpaulins, inspection of dedusting system conditions, restrictions on the number and speed of vehicles, and reforestation. After improvement implemented, the result of the total particulate measurement of ambient air in the community area fully meet the criteria and in the area of the company, there were 10 samples not meeting the GREEN PROPER criteria.*

**Keywords:** *DMAIC, GREEN PROPER, Pareto Diagram, Fishbone Diagram, Action Planning for Failure Mode (APFM)*