

ABSTRAK

Stevani Antonia Devita

Tugas Akhir

Upaya Peningkatan *Compliance Quality Procedure SAP Plant Maintenance* dengan Perbaikan Sistem *Preventive Maintenance*

Dokumen ISO *Quality Procedure SAP Plant Maintenance* milik Departemen *Maintenance* di PT. X memiliki persentase *gap* sebesar 42% dengan keadaan *actual*-nya. *Gap* tersebut antara lain terdapat pada penerapan *Work Order* bagian jasa (*operations*) dan program *Kitting Box* pada *Preventive Maintenance* yang tidak dilakukan. Hal tersebut membuat proses bisnis *Preventive Maintenance* tidak sesuai dengan standar. Selain itu kebutuhan perusahaan juga belum terpenuhi. Penelitian ini bertujuan untuk meningkatkan *compliance* dari dokumen ISO *Quality Procedure SAP Plant Maintenance* tepatnya pada *Preventive Maintenance* serta memenuhi kebutuhan perusahaan. Metode yang digunakan dalam penelitian ini adalah implementasi perbaikan sistem *Preventive Maintenance* dengan bantuan *Gap Analysis* dan *Plan, Do, Check, Action* (PDCA).

Hasil dari penelitian ini adalah pelaksanaan implementasi perbaikan berhasil dilakukan. *Audit checklist* menunjukkan bahwa *Quality Procedure SAP Plant Maintenance* telah terpenuhi sebesar 92% dan *gap* akhir sebesar 8%. Usulan yang diberikan adalah dengan melakukan perbaikan secara *continuously* dan pengawasan terhadap perbaikan tersebut. Selain itu, perekrutan posisi *Planner* dan koordinasi dengan bagian internal juga dapat segera dilakukan sehingga *gap* lain dapat segera diperbaiki.

Kata Kunci: ISO, SAP PM, *preventive maintenance*, *work order*, PDCA, *gap analysis*

ABSTRACT

Stevani Antonia Devita

Undergraduate Thesis

Efforts to Improve Compliance with Quality Procedure SAP Plant Maintenance through Preventive Maintenance System Improvement

The ISO Quality Procedure SAP Plant Maintenance document of the Maintenance Department at PT. X has a gap percentage of 42% compared to the actual condition. The gaps include the implementation of Work Order for service operations and the Kitting Box program in Preventive Maintenance, which have not been carried out. This situation has caused the Preventive Maintenance business process to deviate from the standards, and the company's needs have not been met. This research aims to improve compliance with the ISO Quality Procedure SAP Plant Maintenance document, specifically in Preventive Maintenance, and fulfill the company's needs. The method used in this research is the implementation of system improvement in Preventive Maintenance with the help of Gap Analysis and Plan, Do, Check, Action (PDCA).

The results of this research show that the implementation of improvement has been successfully carried out. The audit checklist indicates that the Quality Procedure SAP Plant Maintenance has been fulfilled by 92%, with a final gap of 8%. The proposed suggestion is to continuously make improvements and supervise the implementation of those improvements. Additionally, the recruitment of a Planner position and coordination with the internal department can also be done promptly so that other gaps can be addressed promptly.

Keywords: ISO, SAP PM, preventive maintenance, work order, PDCA, gap analysis

DAFTAR ISI

HALAMAN JUDUL.....	i
LEMBAR PENGESAHAN.....	ii
LEMBAR PERNYATAAN PERSETUJUAN PUBLIKASI KARYA ILMIAH.....	iii
KATA PENGANTAR.....	iv
ABSTRAK.....	vi
DAFTAR ISI.....	viii
DAFTAR TABEL.....	x
DAFTAR GAMBAR.....	xi
DAFTAR LAMPIRAN.....	xii
1. PENDAHULUAN.....	1
1.1 Latar Belakang Masalah.....	1
1.2 Rumusan Masalah.....	2
1.3 Tujuan Penelitian.....	2
1.4 Batasan Penelitian.....	3
1.5 Sistematika Penelitian.....	3
2. TINJAUAN PUSTAKA.....	4
2.1 ISO 9001:2015.....	4
2.1.1 Audit Internal.....	5
2.1.2 Dokumentasi Sistem Manajemen Mutu.....	5
2.2 <i>Maintenance Activities</i>	6
2.2.1 <i>Preventive Maintenance</i>	6
2.2.2 <i>Corrective Maintenance</i>	6
2.3 <i>Systems Applications and Products (SAP)</i>	7
2.3.1 <i>Plant Maintenance (PM)</i>	7
2.4 <i>Gap Analysis</i>	7
2.5 <i>Plan, Do, Check, Act (PDCA)</i>	8
3. METODE PENELITIAN.....	9
3.1 Identifikasi Masalah.....	9
3.2 Studi Literatur.....	10
3.3 <i>Gap Analysis</i>	10
3.4 Perencanaan Perbaikan.....	10
3.5 Implementasi Rencana Perbaikan.....	10
3.6 Evaluasi Hasil Implementasi Perbaikan.....	10
3.7 Tindak Lanjut dan Solusi.....	11
3.8 Kesimpulan dan Saran.....	11
4. HASIL DAN PEMBAHASAN.....	12
4.1 Departemen <i>Maintenance</i>	12

4.1.1 <i>Maintenance Activities</i>	14
4.2 <i>Gap Analysis</i> Awal.....	23
4.3 Rencana Perbaikan (<i>Plan</i>).....	27
4.3.1 Pembuatan Model Konseptual.....	27
4.3.2 Pengumpulan Data.....	30
4.3.2.1 <i>Functional Location</i>	30
4.3.2.2 <i>Equipment</i>	31
4.3.2.3 <i>Sparepart</i>	32
4.3.2.4 <i>Task List</i>	32
4.3.3 Persiapan Sistem.....	33
4.3.3.1 <i>Data Entry</i>	33
4.3.3.2 <i>Maintenance Plan Scheduling</i>	39
4.4 Implementasi Perbaikan (<i>Do</i>).....	43
4.4.1 Pembuatan <i>Manual Book QP SAP Plant Maintenance (Preventive Maintenance)</i>	43
4.4.2 Program <i>Kitting Box</i>	43
4.4.3 <i>Training</i>	45
4.4.4 <i>Go-Live</i>	46
4.4.5 Pembaharuan <i>Flowchart Business Process</i> dan <i>Document Flow Diagram (DFD)</i> ..	47
4.5 Evaluasi SAP PM (<i>Check</i>).....	53
4.5.1 <i>System Testing</i>	53
4.5.2 <i>User Acceptance Testing</i>	54
4.5.3 <i>Gap Analysis</i> Akhir.....	56
4.6 Tindak Lanjut dan Solusi (<i>Act</i>).....	59
5. KESIMPULAN DAN SARAN.....	63
5.1 Kesimpulan.....	63
5.2 Saran.....	63
DAFTAR REFERENSI.....	65
LAMPIRAN.....	69

DAFTAR TABEL

Tabel 4.1 <i>Audit Checklist Quality Procedure SAP Plant Maintenance</i> Bagian <i>Preventive Maintenance</i> Awal.....	24
Tabel 4.2 <i>Gap Analysis</i> Kebutuhan Perusahaan Awal	26
Tabel 4.3 Hasil <i>System Testing</i>	53
Tabel 4.4 Hasil <i>User Acceptance Testing</i>	55
Tabel 4.5 <i>Audit Checklist Quality Procedure SAP Plant Maintenance</i> Bagian <i>Preventive Maintenance</i> Akhir.....	57
Tabel 4.6 <i>Gap Analysis</i> Kebutuhan Perusahaan Akhir.....	58
Tabel 4.7 <i>List Sparepart Time Based Maintenance (TBM)</i>	61

DAFTAR GAMBAR

Gambar 2.1 Hierarki Dokumen Sistem Manajemen Mutu.....	5
Gambar 3.1 <i>Flowchart</i> Metodologi Penelitian.....	9
Gambar 4.1 Struktur Organisasi Departemen <i>Maintenance</i>	12
Gambar 4.2 <i>Business Process</i> Departemen <i>Maintenance</i>	13
Gambar 4.3 <i>Flowchart Business Process Preventive Maintenance</i>	15
Gambar 4.4 <i>Flowchart Business Process Preventive Maintenance Revised</i>	16
Gambar 4.5 <i>Document Flow Diagram Preventive Maintenance</i>	19
Gambar 4.6 <i>Quality Procedure SAP Plant Maintenance Bagian Preventive Maintenance</i>	21
Gambar 4.7 <i>Quality Procedure SAP Plant Maintenance Bagian Preventive Maintenance Final</i> ..	22
Gambar 4.8 <i>Work Order Bagian Jasa (Operations) Preventive Maintenance</i>	25
Gambar 4.9 Model Konseptual.....	28
Gambar 4.10 <i>Functional Location SAP PM</i>	34
Gambar 4.11 <i>Equipment SAP PM</i>	35
Gambar 4.12 <i>Bill of Material (BOM) Sparepart SAP PM</i>	36
Gambar 4.13 <i>BOM Extruder Hooper Box</i>	37
Gambar 4.14 <i>Group Task List SBY 2C SAP PM</i>	38
Gambar 4.15 <i>Task List Extruder Hooper Box</i>	39
Gambar 4.16 <i>Maintenance Plan Cycle Extruder Hooper Box Monthly</i>	40
Gambar 4.17 <i>Maintenance Plan Scheduling Parameters Extruder Hooper Box Monthly</i>	41
Gambar 4.18 <i>Maintenance Plan Scheduling SAP PM</i>	42
Gambar 4.19 <i>Kitting Box Container Box</i>	44
Gambar 4.20 <i>Kitting Box Keranjang Container</i>	44
Gambar 4.21 <i>Kitting Box Hand Truck</i>	45
Gambar 4.22 <i>Isi Kitting Box</i>	45
Gambar 4.23 <i>Training SAP PM</i>	46
Gambar 4.24 <i>Trial SAP PM</i>	46
Gambar 4.25 <i>List of Orders Line 11 dan Line 12</i>	47
Gambar 4.26 <i>Flowchart Business Process Preventive Maintenance Final</i>	48
Gambar 4.27 <i>Document Flow Diagram Preventive Maintenance Final</i>	51
Gambar 4.28 <i>List of Orders Line 6 dan Line 7</i>	60

DAFTAR LAMPIRAN

1. FM-MNS-051.....	69
2. <i>Work Order</i> dengan <i>T-Code</i> IW31.....	70
3. FM-MNS-055.....	71
4. FM-MNS-052.....	72
5. Buku Pengeluaran Barang.....	73
6. <i>T-Code</i> MIGO.....	74
7. <i>T-Code</i> IW41.....	75
8. <i>T-Code</i> IW32.....	76
9. Data Awal <i>Functional Location</i> , <i>Machine</i> , dan <i>Equipment</i> di SAP PM.....	77
10. Data Awal <i>Task List</i> di SAP PM.....	78
11. <i>Functional Location List</i>	79
12. <i>Equipment List</i>	80
13. <i>Material (Sparepart) Extruder List</i>	81
14. <i>Task List Extruder</i>	82
15. <i>Manual Book Master Data</i>	83
16. <i>Manual Book Quality Procedure SAP Plant Maintenance (Preventive Maintenance)</i>	111