CHAPTER 7
CONCLUSION AND RECOMMENDATION

7.1. Conclusion

There are problems at spinning work center. The air around ring frame machine is dusty and that causes the surfaces of yarn produced by this machine defected (not aligned). The defect product must be cut at the finishing work center; this prolongs production processes, creating a bottleneck at this work center. Therefore, the real production does not reach the production target (late of production) that causes profit loss. The root problem is the dust cleaner machine cannot absorb dust optimally, because lack of hole at exhaust arm.

Based on those problems, this research propose a design improvement of dust cleaner machine by adding an appropriate number of exhaust systems, to maximize the ability of absorbing the dust in order to help PT. Kusumaputra Santosa clean the air condition in the spinning work center.

The improvements of dust cleaner machine by add ten holes at exhaust arm can maximize the ability of absorbing dust around spinning work center at PT Kusumaputra Santosa. This statement proved after long experiment. List below will show you about the decline of dust level in the air.

1. The dust level at Ring Spinnig 1 decrease from 1.00 mg/m^3 to 0.7 mg/m^3
2. The dust level at Ring Spinnig 2 decrease from 1.33 mg/m^3 to 0.7 mg/m^3
3. The dust level at Ring Spinnig 3 decrease from 0.66 mg/m^3 to 0.33 mg/m^3
4. The dust level at Ring Spinnig 4 decrease from 0.66 mg/m^3 to 0.33 mg/m^3

Applying new design of dust cleaner machine can clean up the air at spinning work center. Then because of that, the root of the problem as explained in the background can be solved one by one. Clean air increases the quality of yarn, so the defect product can be reduced. This can be seen from the number of cut and joint yarn at finishing work center, from the average of 10.3 decrease to 7.8, so the level of bottleneck can be reduced and production process can be fast.

The production process is fast, the level of production is increase, it can be shown at yarn type 32 CD and 30 CD. Yarn type 32 CD increases from 0.38 bale/day become 0.447 bale/day, yarn type 30 CD increase from 0.25 bale/day become 0.3 bale/day.

7.2. Recommendation

Based on three data above can be conclude that new design of dust cleaner machine works as desired, so the company can apply it to maximize production process.

The company can replace the old dust cleaner machine with the new design at all of spinning machines. This can make the air clean, and the ring spinning machine will produce the good yarns (align). Then, at the finishing work center there will be less number of cut and joint the yarn, so the production process will be faster, then finally the real production can reach the production target.

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http://forum.o-fish.com/printthread.php?tid=3541
https://www.abprospecting.com/?q=node/262

APPENDICES

Appendix 1

Result of Measurement of Dust level in the air with Old Machine

LABORATORIUM HIPERKES DAN KESELAMATAN KERJA
DINAS TENAGA KERJA DAN TRANSMIGRASI PROVINSI DIY
Jl. Ireda No.38, Dipowinatan Telp/Fax (0274) 371716
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Universitas	:	Atma Jaya, Yogyakarta
Lokasi Pengukuran	:	PT. Kusuma Putra Santosa
Alamat Perusahaan	:	Ds. Jaten, Karanganyar, Jawa Tengah
Tanggal Pengukuran	:	28 Pebruari 2014

No	Lokasi	Parameter	Satuan	N A B	Hasil Analisa	Metode
1.	Ring Spining Titik ke 1 Tengah ujung barat	Debu kapas atau katun	mg/m^3	0,2	**1,00**	Gravimetri
2.	Ring Spining Titik ke 2 Tengah ujung timur	Debu kapas atau katun	mg/m^3	0,2	**1,33**	Gravimetri
3.	Ring Spining Titik ke 3 Sebelah selatan	Debu kapas atau katun	mg/m^3	0,2	**0,66**	Gravimetri
4.	Ring Spining Titik ke 4 Sebelah utara	Debu kapas atau katun	mg/m^3	0,2	**0,66**	Gravimetri

Keterangan :

- *Nilai Ambang Batas Faktor Kimia di Udara Lingkungan Kerja berdasarkan SNI 19-0232-2005*

Mengetahui
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Catatan :

1.Hasil pengujian hanya berlaku pada sampel yang diuji
2.Laporan pengujian tidak boleh digandakan tanpa ijin Manajer Teknis

Appendix 1

Result of Measurement of Dust level in the air with New Machine

PEMERINTAH DAERAH DAERAH ISTIMEWA YOGYAKARTA
DINAS TENAGA KERJA DAN TRANSMIGRASI
BALAI HIPERKES DAN KESELAMATAN KERJA
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Lokasi Pengambilan Sampel	:	PT. KUSUMA HADI SANTOSO
Alamat Perusahaan	:	Jaten, Karanganyar, Jawa Tengah
Tanggal Pengujian Sampel	:	19 Mei 2014

No	Lokasi	Jenis Debu	Satuan	Hasil Pengujian	NAB	Metode
1.	Pengukuran Titik Ke I	Kapas/ Katun	mg/m^3	0,7	0,2	Gravimetri
2.	Pengukuran Titik Ke II	Kapas/ Katun	mg/m^3	0,7	0,2	Gravimetri
3.	Pengukuran Titik Ke III	Kapas/ Katun	mg/m^3	0,33	0,2	Gravimetri
4.	Pengukuran Titik Ke IV	Kapas/ Katun	mg/m^3	0,33	0,2	Gravimetri

Keterangan :

1. *Nilai Ambang Batas debu berdasarkan Peraturan Menteri Tenaga Kerja dan Transmigrasi Nomor Per.13/Men/X/2011 Tahun 2011 tentang Nilai Ambang Batas Faktor Fisika Dan Faktor Kimia Di Tempat Kerja.*

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Petugas Lapangan

Haryanto SPd
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Catatan :

1. *Hasil pengujian hanya berlaku pada sampel yang diuji*
2. *Laporan pengujian tidak boleh digandakan tanpa ijin Manajer Teknis*

Appendix 3

Picture of New Design of Exhaust Arm

serviens in lumine veritatis