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## APPENDIX

### Example in Work Procedure of Developed Scheduling Method

#### Nomenclatures

DATE	: The date that the fabric is sent to the company.
OKLABDATE	: The date that the lab number is confirmed.
CUSNO	: The customer number.
ORDNO	: The order number.
TYPE	: The part of fabric.
PRODUCT	: The type of fabric.
Work	: The type of production.
Finishing	: The type of finishing.
HI	: The width of fabric (inch).
UNIT	: The amount of roll.
WEIGHTALL	: The weight of fabric (kg.)

Step 3 : Set the period of scheduling in two day at 1/6/99 - 2/6/99. Classify only ready orders

DATE	OKLABDAT	CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	Finishing	HI	UNIT	WEIGHTALL
1/6/99	1/6/99	KTK001	0179	fabric	CVC	bleach	Re-Finishing	Cut Fabric	84	16	305.20
1/6/99	1/6/99	KTK001	0178	fabric	CVC	yellow	Re-Dyeing	Cut Fabric	84	15	298.80
1/6/99	1/6/99	KTK001	0181	fabric	CVC	red	Re-Dyeing	Cut Fabric	65	9	169.80
1/6/99	1/6/99	YHL001	2181	fabric	TC	bleach	Re-Dyeing	Cut Fabric	84	12	223.30
1/6/99	1/6/99	YHL001	2179	rip	COTTON	cream	Re-Dyeing	Uncut Fabric	20	2	25.60
1/6/99	1/6/99	YHL001	2180	fabric	COTTON	bleach	Dyeing	Cut Fabric	72	7	126.70
1/6/99	1/6/99	PKF001	2213/283RE	rip	COTTON	bleach	Re-Dyeing	Cut Fabric	67	23	462.00
1/6/99	1/6/99	KTK001	0188	fabric	CVC	navy blue	Dyeing	Cut Fabric	65	9	180.50
1/6/99	1/6/99	KTK001	0039	fabric	TC	bleach	Dyeing	Cut Fabric	72	1	12.30
1/6/99	1/6/99	KTK001	0185	fabric	TC	pink	Dyeing	Cut Fabric	62	15	314.40
1/6/99	1/6/99	KTK001	0187	fabric	TC	pink	Dyeing	Cut Fabric	76	20	451.00
1/6/99	1/6/99	KTK001	0183	fabric	COTTON	blue	Dyeing	Cut Fabric	72	2	41.70
1/6/99	1/6/99	KTK001	0183	fabric	COTTON	yellow	Dyeing	Cut Fabric	72	1	21.90
1/6/99	1/6/99	KTK001	0184	fabric	COTTON	navy blue	Dyeing	Cut Fabric	72	4	87.40
1/6/99	1/6/99	KTK001	0182	fabric	COTTON	bleach	Dyeing	Cut Fabric	72	5	108.20
1/6/99	1/6/99	KTK001	0180	fabric	COTTON	knaki	Dyeing	Cut Fabric	88	1	17.90
1/6/99	1/6/99	KTK001	0180	rip	COTTON	knaki	Dyeing	Uncut Fabric	28	1	8.80

DATE	OKLABDAT	CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	Finishing	HI	UNIT	WEIGHTALL
1/6/99	1/6/99	KTK001	0180	collar	COTTON	knaki	Dyeing	Uncut Fabric	28	1	1.50
1/6/99	1/6/99	KTK001	0180	sleeve	COTTON	knaki	Dyeing	Uncut Fabric	28	1	1.00
1/6/99	1/6/99	YHL001	2368	fabric	CVC	knaki	Dyeing	Cut Fabric	68	2	36.80
1/6/99	1/6/99	YHL001	2361	fabric	CVC	blue	Dyeing	Cut Fabric	53	23	482.00
1/6/99	1/6/99	YHL001	2369	fabric	TC	off-white	Dyeing	Uncut Fabric	36	3	65.60
1/6/99	1/6/99	MTX001	4297A	fabric	TK	bleach	Dyeing	Uncut Fabric	36	5	101.80
1/6/99	1/6/99	MTX001	4291	fabric	TOP	scour	Dyeing	Uncut Fabric	38	10	200.30
1/6/99	1/6/99	MTX001	4296	fabric	POLY	bleach	Dyeing	Cut Fabric	74	23	474.80
1/6/99	1/6/99	MTX001	4293	rip	TC	violet	Dyeing	Uncut Fabric	28	15	304.70
1/6/99	1/6/99	MTX001	4293	rip	TC	pink	Dyeing	Uncut Fabric	28	15	304.70
1/6/99	1/6/99	MTX001	4293	rip	TC	yellow	Dyeing	Uncut Fabric	28	20	406.20
1/6/99	1/6/99	MTX001	4298A	fabric	TK	green	Dyeing	Uncut Fabric	39	5	103.10
1/6/99	1/6/99	MTX001	4298A	rip	TK	green	Dyeing	Uncut Fabric	28	1	4.90
1/6/99	1/6/99	MTX001	4298A	collar	TK	green	Dyeing	Uncut Fabric	28	1	12.40
1/6/99	1/6/99	MTX001	4298A	fabric	TK	brown	Dyeing	Uncut Fabric	39	5	103.10
1/6/99	1/6/99	MTX001	4298A	rip	TK	brown	Dyeing	Uncut Fabric	28	1	4.80
1/6/99	1/6/99	MTX001	4298A	collar	TK	brown	Dyeing	Uncut Fabric	28	1	12.80
1/6/99	1/6/99	MTX001	4298A	fabric	TK	knaki	Dyeing	Uncut Fabric	39	5	103.10
1/6/99	1/6/99	MTX001	4298A	rip	TK	knaki	Dyeing	Uncut Fabric	28	1	4.80
1/6/99	1/6/99	MTX001	4298A	collar	TK	knaki	Dyeing	Uncut Fabric	28	1	12.00
1/6/99	1/6/99	MTX001	4298A	fabric	TK	gray	Dyeing	Uncut Fabric	39	5	103.10

DATE	OKLABDAT	CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	Finishing	HI	UNIT	WEIGHTALL
1/6/99	1/6/99	MTX001	4298A	rip	TK	gray	Dyeing	Uncut Fabric	28	1	6.00
1/6/99	1/6/99	MTX001	4298A	collar	TK	gray	Dyeing	Uncut Fabric	28	1	12.00
1/6/99	1/6/99	MTX001	4294	fabric	TC+T	navy blue	Dyeing	Uncut Fabric	39	10	211.90
1/6/99	1/6/99	MTX001	4294	fabric	TC+T	black	Dyeing	Uncut Fabric	39	10	211.90
1/6/99	1/6/99	MTX001	4294	fabric	TC+T	cream	Dyeing	Uncut Fabric	39	10	212.00
1/6/99	1/6/99	MTX001	4295	fabric	TR	yellow	Dyeing	Uncut Fabric	36.5	10	214.00
1/6/99	1/6/99	MTX001	4295	fabric	TR	blue	Dyeing	Uncut Fabric	36.5	10	214.10
1/6/99	1/6/99	TBK001	00317	fabric	TK	red	Dyeing	Cut Fabric	64	10	192.60
1/6/99	1/6/99	TBK001	00317	fabric	TK	brown	Dyeing	Cut Fabric	64	10	192.60
1/6/99	1/6/99	TBK001	00317	fabric	TK	tartar	Dyeing	Cut Fabric	64	10	192.60
1/6/99	1/6/99	TBK001	00317	fabric	TK	navy blue	Dyeing	Cut Fabric	64	10	192.60
1/6/99	1/6/99	TBK001	00317	fabric	TK	yellow	Dyeing	Cut Fabric	64	10	192.60
1/6/99	1/6/99	TBK001	00317	fabric	TK	green	Dyeing	Cut Fabric	64	10	192.60
1/6/99	1/6/99	HJX001	0124	fabric	POLY	navy blue	Dyeing	Cut Fabric	84	10	230.30
1/6/99	1/6/99	HJX001	0124	fabric	POLY	blue	Dyeing	Cut Fabric	84	10	230.30
1/6/99	1/6/99	HJX001	0124	fabric	POLY	black	Dyeing	Cut Fabric	84	10	230.30
1/6/99	1/6/99	HJX001	434	rip	POLY	red	Dyeing	Uncut Fabric	32	1	14.10
1/6/99	1/6/99	HJX001	0082	fabric	POLY	red	Dyeing	Uncut Fabric	51	9	147.80
1/6/99	1/6/99	HJX001	0082	fabric	POLY	green	Dyeing	Uncut Fabric	51	9	147.80
1/6/99	1/6/99	HJX001	0082	fabric	POLY	blue	Dyeing	Uncut Fabric	51	9	147.80
1/6/99	1/6/99	HJX001	0082	fabric	POLY	yellow	Dyeing	Uncut Fabric	51	5	82.10



DATE	OKLABDAT	CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	Finishing	HI	UNIT	WEIGHTALL
1/6/99	1/6/99	HJX001	0082	fabric	POLY	navy blue	Dyeing	Cut Fabric	90	6	98.50
1/6/99	1/6/99	HJX001	0082	fabric	POLY	black	Dyeing	Cut Fabric	90	12	197.20
1/6/99	1/6/99	PKF001	2212/283RE	rip	COTTON	bleach	Re-Dyeing	Cut Fabric	67	21	419.40
1/6/99	1/6/99	PKF001	2212/283RE	rip	COTTON	bleach	Re-Dyeing	Uncut Fabric	67	2	40.50
1/6/99	1/6/99	JSX001	01	fabric	TC	pink	Finishing	Uncut Fabric	37	1	20.60
1/6/99	1/6/99	JSX001	0164	fabric	TC	off-white	Dyeing	Cut Fabric	64	24	522.10
1/6/99	1/6/99	JSX001	0165	fabric	TC	off-white	Dyeing	Cut Fabric	64	24	518.00
1/6/99	1/6/99	JSX001	0166	fabric	TR	mustard	Dyeing	Uncut Fabric	46	10	208.20
1/6/99	1/6/99	JSX001	0167	fabric	TR	blue	Dyeing	Uncut Fabric	46	10	208.10
1/6/99	1/6/99	PLK001	0330A	fabric	POLY	red	Dyeing	Cut Fabric	70	20	451.40
1/6/99	1/6/99	PLK001	0330A	rip	POLY	red	Dyeing	Uncut Fabric	26	2	23.50
1/6/99	1/6/99	PLK001	0334A	fabric	TK	yellow	Dyeing	Cut Fabric	70	30	681.10
1/6/99	1/6/99	PLK001	0334A	rip	TK	yellow	Dyeing	Uncut Fabric	26	3	44.20
1/6/99	1/6/99	SEK001	0219	fabric	CVC	green	Dyeing	Uncut Fabric	35	15	285.60
1/6/99	1/6/99	SEX001	0436RT2	fabric	COTTON	gray	Dyeing	Uncut Fabric	24	2	36.70
1/6/99	1/6/99	SEX001	0436RT2	rip	COTTON	gray	Dyeing	Uncut Fabric	24	1	8.70
1/6/99	1/6/99	ITC001	3469A	fabric	COTTON	cream	Dyeing	Cut Fabric	60	8	171.20
1/6/99	1/6/99	ITC001	3478	fabric	CVC	bleach	Dyeing	Cut Fabric	84	2	43.10
1/6/99	1/6/99	ITC001	3478	fabric	CVC	red	Dyeing	Cut Fabric	84	3	64.70
1/6/99	1/6/99	ITC001	3479	fabric	CVC	navy blue	Dyeing	Cut Fabric	84	5	107.70
1/6/99	1/6/99	ITC001	3479	rip	CVC	navy blue	Dyeing	Uncut Fabric	24	1	9.10

DATE	OKLABDAT	CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	Finishing	HI	UNIT	WEIGHTALL
1/6/99	1/6/99	ITC001	3479	fabric	CVC	orange	Dyeing	Cut Fabric	84	1	21.60
1/6/99	1/6/99	ITC001	3479	rip	CVC	orange	Dyeing	Uncut Fabric	24	1	11.60
1/6/99	1/6/99	ITC001	3480A	fabric	COTTON	scour	Dyeing	Cut Fabric	80	18	384.90
1/6/99	1/6/99	ITC001	930800	fabric	COTTON	yellow	Re-Dyeing	Cut Fabric	62	12	232.90
1/6/99	1/6/99	ITC001	930800	rip	COTTON	yellow	Re-Dyeing	Uncut Fabric	31	1	14.90
1/6/99	1/6/99	ITC001	930801	fabric	CVC	cream	Re-Finishing	Cut Fabric	68	20	417.40
1/6/99	1/6/99	ITC001	930803	fabric	CVC	maroon	Re-Finishing	Cut Fabric	68	3	60.30
1/6/99	1/6/99	MTX001	4888A	rip	TOP	gray	Finishing	Uncut Fabric	28	1	19.50
1/6/99	1/6/99	MTX001	4438	fabric	CVC	navy blue	Re-Dyeing	Cut Fabric	86	14	280.60
1/6/99	1/6/99	MTX001	4436	fabric	CVC	navy blue	Re-Dyeing	Cut Fabric	86	16	316.10
1/6/99	1/6/99	MTX001	4437	fabric	CVC	navy blue	Re-Dyeing	Cut Fabric	86	5	99.80
1/6/99	1/6/99	MTX001	4435	fabric	TC+TOP	gray	Finishing	Uncut Fabric	38	20	408.60
1/6/99	1/6/99	MTX001	4439	fabric	CVC	yellow	Re-Finishing	Uncut Fabric	48	2	31.80
1/6/99	1/6/99	MTX001	4439	fabric	CVC	gray	Re-Finishing	Uncut Fabric	48	1	9.00
1/6/99	1/6/99	MTX001	4439	fabric	CVC	orange	Re-Finishing	Uncut Fabric	48	1	19.30
1/6/99	1/6/99	TBK001	00354	fabric	TK	bleach	Dyeing	Cut Fabric	77	6	123.10
1/6/99	1/6/99	PKF001	2214/297	fabric	COTTON	bleach	Dyeing	Cut Fabric	68	7	156.14
1/6/99	1/6/99	LLN001	P6238	fabric	TC	off-white	Dyeing	Cut Fabric	74	7	143.80
1/6/99	1/6/99	LLN001	P6249	fabric	POLY	green	Dyeing	Uncut Fabric	46	5	102.10
1/6/99	1/6/99	LLN001	P6248	fabric	POLY	pink	Dyeing	Uncut Fabric	46	5	101.62
1/6/99	1/6/99	SEX001	0462	fabric	TK	brown	Dyeing	Uncut Fabric	36	20	428.70

DATE	OKLABDAT	CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	Finishing	HI	UNIT	WEIGHTALL
1/6/99	1/6/99	SEX001	0462	rip	TK	brown	Dyeing	Uncut Fabric	28	1	12.00
1/6/99	1/6/99	SEX001	0461	fabric	TK	cream	Dyeing	Uncut Fabric	36	20	428.60
1/6/99	1/6/99	SEX001	0461	rip	TK	cream	Dyeing	Uncut Fabric	28	1	12.00
1/6/99	1/6/99	SEX001	0461	fabric	TK	blue	Dyeing	Uncut Fabric	36	20	428.60
1/6/99	1/6/99	SEX001	0461	rip	TK	blue	Dyeing	Uncut Fabric	28	1	12.00
1/6/99	1/6/99	SEX001	0461	fabric	TK	navy blue	Dyeing	Uncut Fabric	36	25	535.70
1/6/99	1/6/99	SEX001	0461	rip	TK	navy blue	Dyeing	Uncut Fabric	28	1	15.00
1/6/99	1/6/99	SEX001	0461	fabric	TK	red	Dyeing	Uncut Fabric	36	15	321.50
1/6/99	1/6/99	SEX001	0461	rip	TK	red	Dyeing	Uncut Fabric	28	1	9.00
1/6/99	1/6/99	SEX001	0466	fabric	COTTON	yellow	Dyeing	Uncut Fabric	18	8	166.50
1/6/99	1/6/99	SEX001	0466	rip	COTTON	yellow	Dyeing	Uncut Fabric	22	1	8.00
1/6/99	1/6/99	SEX001	0466	fabric	COTTON	knaki	Dyeing	Uncut Fabric	18	8	166.60
1/6/99	1/6/99	SEX001	0466	rip	COTTON	knaki	Dyeing	Uncut Fabric	22	1	8.00
1/6/99	1/6/99	SEX001	0468	fabric	TK	bleach	Dyeing	Uncut Fabric	36	20	409.80
1/6/99	1/6/99	SEX001	0468	rip	TK	bleach	Dyeing	Uncut Fabric	26	1	9.10
1/6/99	1/6/99	SEX001	0468	collar	TK	bleach	Dyeing	Uncut Fabric	26	1	9.10
1/6/99	1/6/99	SEX001	0467	fabric	TK	red	Dyeing	Uncut Fabric	36	15	318.40
1/6/99	1/6/99	SEX001	0467	rip	TK	red	Dyeing	Uncut Fabric	26	1	11.00
1/6/99	1/6/99	SEX001	0467	collar	TK	red	Dyeing	Uncut Fabric	26	1	9.20
1/6/99	1/6/99	SEX001	0467	fabric	TK	cream	Dyeing	Uncut Fabric	36	15	318.40
1/6/99	1/6/99	SEX001	0467	rip	TK	cream	Dyeing	Uncut Fabric	26	1	11.00

DATE	OKLABDAT	CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	Finishing	HI	UNIT	WEIGHTALL
1/6/99	1/6/99	SEX001	0467	collar	TK	cream	Dyeing	Uncut Fabric	26	1	10.20
2/6/99	2/6/99	JKX001	4106	fabric	POLY	off-white	Dyeing	Uncut Fabric	50	22	431.40
2/6/99	2/6/99	JKX001	4105	fabric	POLY	off-white	Dyeing	Uncut Fabric	50	18	414.10
2/6/99	2/6/99	TAL001	0203	fabric	POLY	off-white	Dyeing	Uncut Fabric	50	62	1158.00
2/6/99	2/6/99	SEX001	0470	fabric	TK	navy blue	Dyeing	Uncut Fabric	38	10	216.40
2/6/99	2/6/99	SEX001	0470	fabric	TK	black	Dyeing	Uncut Fabric	38	10	216.50
2/6/99	2/6/99	CPI001	0260	fabric	TK	navy blue	Dyeing	Uncut Fabric	37	23	460.00
2/6/99	2/6/99	CPI001	0265	rip	TK	black	Dyeing	Uncut Fabric	30	2	40.30
2/6/99	2/6/99	CPI001	0267	fabric	TK	gray	Dyeing	Uncut Fabric	37	23	467.80
2/6/99	2/6/99	CPI001	0263	fabric	TK	green	Dyeing	Uncut Fabric	37	10	213.50
2/6/99	2/6/99	CPI001	0263	rip	TK	green	Dyeing	Uncut Fabric	30	1	20.40
2/6/99	2/6/99	CPI001	0263	fabric	TK	beige	Dyeing	Uncut Fabric	37	10	213.50
2/6/99	2/6/99	CPI001	0263	rip	TK	beige	Dyeing	Uncut Fabric	30	1	20.20
2/6/99	2/6/99	SEX001	0469	fabric	CVC	pink	Dyeing	Uncut Fabric	34	4	80.00
2/6/99	2/6/99	SPG001	290	fabric	NYLON	black	Re-Finishing	Cut Fabric	74	1	17.50
2/6/99	2/6/99	ASS001	0940	fabric	NYLON DS-075/1	black	Dyeing	Cut Fabric	60	43	865.30
2/6/99	2/6/99	ASS001	0940	fabric	NYLON DS-075/1	black	Dyeing	Cut Fabric	60	10	201.20
2/6/99	2/6/99	ASS001	0940	fabric	NYLON DS-075/1	brown	Dyeing	Cut Fabric	60	10	201.20
2/6/99	2/6/99	ASS001	0940	fabric	NYLON DS-075/1	navy blue	Dyeing	Cut Fabric	60	5	100.60
2/6/99	2/6/99	ASS001	4963	fabric	NYLON DS-175	black	Dyeing	Cut Fabric	60	16	323.30
2/6/99	2/6/99	KTK001	0197	fabric	CVC	navy blue	Re-Dyeing	Cut Fabric	74	23	494.50

DATE	OKLABDAT	CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	Finishing	HI	UNIT	WEIGHTALL
2/6/99	2/6/99	KTK001	0189	fabric	CVC	blue	Re-Dyeing	Cut Fabric	60	9	162.00
2/6/99	2/6/99	ESO001	DS20	fabric	POLY	bleach	Re-Finishing	Cut Fabric	70	1	11.00
2/6/99	2/6/99	YHL001	2382	fabric	CVC	blue	Dyeing	Cut Fabric	53	24	503.00
2/6/99	2/6/99	YHL001	2383	rip	CVC	bleach	Dyeing	Uncut Fabric	22	2	40.80
2/6/99	2/6/99	YHL002	4964	rip	TC	green	Dyeing	Uncut Fabric	18	2	31.20
2/6/99	2/6/99	YHL002	4964	rip	TC	yellow	Dyeing	Uncut Fabric	18	2	36.70
2/6/99	2/6/99	YHL002	4964	rip	TC	orange	Dyeing	Uncut Fabric	18	2	26.00
2/6/99	2/6/99	YHL002	4970A	fabric	TC	red	Dyeing	Uncut Fabric	37	8	163.40
2/6/99	2/6/99	YHL002	4970A	fabric	TC	navy blue	Dyeing	Uncut Fabric	37	7	151.20
2/6/99	2/6/99	YHL002	4979	fabric	TC	cream	Dyeing	Uncut Fabric	32	6	135.40
2/6/99	2/6/99	YHL002	4979	rip	TC	cream	Dyeing	Uncut Fabric	18	1	10.00
2/6/99	2/6/99	BIX001	24/02	fabric	TC+T	navy blue	Dyeing	Uncut Fabric	36	15	304.30
2/6/99	2/6/99	BIX001	24/02	rip	TC+T	navy blue	Dyeing	Uncut Fabric	30	1	23.40
2/6/99	2/6/99	BIX001	24/02	fabric	TC+T	black	Dyeing	Uncut Fabric	36	15	304.40
2/6/99	2/6/99	BIX001	24/02	rip	TC+T	black	Dyeing	Uncut Fabric	30	1	23.40
2/6/99	2/6/99	YHL001	2392	fabric	TC	violet	Dyeing	Cut Fabric	92	25	512.90
2/6/99	2/6/99	YHL001	2393	fabric	TC	pink	Dyeing	Uncut Fabric	36	16	324.80
2/6/99	2/6/99	MTX001	0013	fabric	CVC	bleach	Dyeing	Cut Fabric	68	27	572.70
2/6/99	2/6/99	MTX001	0028	fabric	TK	navy blue	Dyeing	Uncut Fabric	39	5	102.60
2/6/99	2/6/99	MTX001	0028	rip	TK	navy blue	Dyeing	Uncut Fabric	28	1	5.50
2/6/99	2/6/99	MTX001	0028	collar	TK	navy blue	Dyeing	Uncut Fabric	28	1	12.00

DATE	OKLABDAT	CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	Finishing	HI	UNIT	WEIGHTALL
2/6/99	2/6/99	MTX001	0008	fabric	TR	blue	Dyeing	Uncut Fabric	36.5	5	104.20
2/6/99	2/6/99	MTX001	0014	fabric	TC	scour	Dyeing	Uncut Fabric	38	20	441.50
2/6/99	2/6/99	MTX001	4299	fabric	TK	navy blue	Dyeing	Uncut Fabric	38	15	301.30
2/6/99	2/6/99	MTX001	4299	fabric	TK	black	Dyeing	Uncut Fabric	38	15	301.30
2/6/99	2/6/99	KTK001	0190	fabric	COTTON	knaki	Dyeing	Cut Fabric	72	1	10.00
2/6/99	2/6/99	KTK001	0191	fabric	COTTON	navy blue	Finishing	Cut Fabric	74	2	40.00
2/6/99	2/6/99	KTK001	0198	fabric	TC	yellow	Dyeing	Cut Fabric	62	15	318.80
2/6/99	2/6/99	KTK001	0192	fabric	COTTON	bleach	Dyeing	Cut Fabric	78	4	73.70
2/6/99	2/6/99	KTK001	0193	fabric	TC	navy blue	Dyeing	Cut Fabric	72	7	152.00
2/6/99	2/6/99	KTK001	0193	rip	TC	navy blue	Dyeing	Uncut Fabric	30	3	52.00
2/6/99	2/6/99	KTK001	0194	fabric	TC	bleach	Dyeing	Cut Fabric	72	17	371.40
2/6/99	2/6/99	KTK001	0194	rip	TC	bleach	Dyeing	Uncut Fabric	30	2	31.40
2/6/99	2/6/99	KTK001	0195	fabric	COTTON	blue	Dyeing	Cut Fabric	49	25	495.20
2/6/99	2/6/99	KTK001	0196	fabric	CVC	navy blue	Dyeing	Cut Fabric	68	26	539.60
2/6/99	2/6/99	TBK001	00359	fabric	TK	yellow	Re-Finishing	Cut Fabric	72	10	212.70
2/6/99	2/6/99	TBK001	00359	fabric	TK	cream	Re-Finishing	Cut Fabric	72	5	104.30
2/6/99	2/6/99	TMT001	1153	fabric	TC	pink	Re-Finishing	Cut Fabric	68	11	214.10
2/6/99	2/6/99	TBK001	00360	fabric	TC+T	black	Dyeing	Cut Fabric	77	6	123.00
2/6/99	2/6/99	ITC001	3483	fabric	COTTON	green	Dyeing	Cut Fabric	68	18	394.20
2/6/99	2/6/99	ITC001	3483	rip	COTTON	green	Dyeing	Uncut Fabric	28	2	33.00
2/6/99	2/6/99	ITC001	3483	rip	COTTON	green	Dyeing	Uncut Fabric	28	3	49.50

DATE	OKLABDAT	CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	Finishing	HI	UNIT	WEIGHTALL
2/6/99	2/6/99	ITC001	3484A	fabric	CVC	navy blue	Dyeing	Cut Fabric	84	15	322.90
2/6/99	2/6/99	LLN001	P6253	fabric	POLY	green	Dyeing	Uncut Fabric	46	5	106.16
2/6/99	2/6/99	LLN001	P6254	fabric	POLY	pink	Dyeing	Uncut Fabric	46	10	207.70
2/6/99	2/6/99	MTX001	0011	fabric	TK	bleach	Dyeing	Uncut Fabric	39	15	301.10
2/6/99	2/6/99	MTX001	0012	fabric	TOP	scour	Dyeing	Uncut Fabric	39	20	411.50
2/6/99	2/6/99	MTX001	0029	fabric	TK	off-white	Dyeing	Uncut Fabric	38	10	206.10
2/6/99	2/6/99	MTX001	0030	fabric	POLY+TOP	scour	Dyeing	Uncut Fabric	39	20	410.50
2/6/99	2/6/99	TAL001	0205	fabric	POLY	off-white	Dyeing	Uncut Fabric	50	33	616.30
2/6/99	2/6/99	ITC001	930807	fabric	TK	gray	Re-Dyeing	Cut Fabric	65	15	315.70

The example of unready orders

DATE	OKLABDAT	CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	Finishing	HI	UNIT	WEIGHTALL
1/6/99	18/8/99	KTK001	0186	fabric	COTTON	bleach	Dyeing	Cut Fabric	68	23	477.40
2/6/99	5/6/99	CPI001	0261	fabric	TK	black	Dyeing	Uncut Fabric	37	12	466.00
2/6/99	5/6/99	CPI001	0261	fabric	TK	black	Dyeing	Uncut Fabric	37	11	222.90
2/6/99	4/6/99	MTX001	0025	fabric	CVC	bleach	Dyeing	Cut Fabric	72	2	41.80
2/6/99	12/6/99	LLN001	P6256	fabric	POLY	orange	Dyeing	Uncut Fabric	38	1	6.62
2/6/99	12/6/99	LLN001	P6256	rip	POLY	orange	Dyeing	Uncut Fabric	28	1	4.50
2/6/99	5/6/99	MTX001	0006	fabric	TR	violet	Dyeing	Uncut Fabric	36.5	10	208.40
2/6/99	5/6/99	MTX001	0006	fabric	TR	knaki	Dyeing	Uncut Fabric	36.5	10	208.40
2/6/99	5/6/99	MTX001	0006	fabric	TR	cream	Dyeing	Uncut Fabric	36.5	10	208.40
2/6/99	6/6/99	TAL001	2002A	rip	POLY	bleach	Dyeing	Uncut Fabric	20	8	127.50
2/6/99	8/6/99	TAL001	2002A	rip	POLY	black	Dyeing	Uncut Fabric	20	5	79.80
2/6/99	7/6/99	TAL001	2001A	fabric	POLY	bleach	Dyeing	Uncut Fabric	38	17	354.70
2/6/99	7/6/99	TAL001	2001A	fabric	POLY	navy blue	Dyeing	Uncut Fabric	38	10	208.60
2/6/99	7/8/99	TAL001	2001A	fabric	POLY	gray	Dyeing	Uncut Fabric	38	3	62.60



**Step 4** : Classify orders in three types of Finishing machine

**Cut Fabric Finishing Machine**

CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	Finishing	UNIT	WEIGHTALL
KTK001	0179	fabric	CVC	bleach	Re-Finishing	Cut Fabric	16	305.20
KTK001	0178	fabric	CVC	yellow	Re-Dyeing	Cut Fabric	15	298.80
KTK001	0181	fabric	CVC	red	Re-Dyeing	Cut Fabric	9	169.80
YHL001	2181	fabric	TC	bleach	Re-Dyeing	Cut Fabric	12	223.30
YHL001	2180	fabric	COTTON	bleach	Dyeing	Cut Fabric	7	126.70
PKF001	2213/283RE	rip	COTTON	bleach	Re-Dyeing	Cut Fabric	23	462.00
KTK001	0188	fabric	CVC	navy blue	Dyeing	Cut Fabric	9	180.50
KTK001	0039	fabric	TC	bleach	Dyeing	Cut Fabric	1	12.30
KTK001	0185	fabric	TC	pink	Dyeing	Cut Fabric	15	314.40
KTK001	0187	fabric	TC	pink	Dyeing	Cut Fabric	20	451.00
KTK001	0183	fabric	COTTON	blue	Dyeing	Cut Fabric	2	41.70
KTK001	0183	fabric	COTTON	yellow	Dyeing	Cut Fabric	1	21.90
KTK001	0184	fabric	COTTON	navy blue	Dyeing	Cut Fabric	4	87.40
KTK001	0182	fabric	COTTON	bleach	Dyeing	Cut Fabric	5	108.20
KTK001	0180	fabric	COTTON	knaki	Dyeing	Cut Fabric	1	17.90

CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	Finishing	UNIT	WEIGHTALL
YHL001	2368	fabric	CVC	knaki	Dyeing	Cut Fabric	2	36.80
YHL001	2361	fabric	CVC	blue	Dyeing	Cut Fabric	23	482.00
MTX001	4296	fabric	POLY	bleach	Dyeing	Cut Fabric	23	474.80
TBK001	00317	fabric	TK	red	Dyeing	Cut Fabric	10	192.60
TBK001	00317	fabric	TK	brown	Dyeing	Cut Fabric	10	192.60
TBK001	00317	fabric	TK	tartar	Dyeing	Cut Fabric	10	192.60
TBK001	00317	fabric	TK	navy blue	Dyeing	Cut Fabric	10	192.60
TBK001	00317	fabric	TK	yellow	Dyeing	Cut Fabric	10	192.60
TBK001	00317	fabric	TK	green	Dyeing	Cut Fabric	10	192.60
HJX001	0124	fabric	POLY	navy blue	Dyeing	Cut Fabric	10	230.30
HJX001	0124	fabric	POLY	blue	Dyeing	Cut Fabric	10	230.30
HJX001	0124	fabric	POLY	black	Dyeing	Cut Fabric	10	230.30
HJX001	0082	fabric	POLY	navy blue	Dyeing	Cut Fabric	6	98.50
HJX001	0082	fabric	POLY	black	Dyeing	Cut Fabric	12	197.20
PKF001	2212/283RE	rip	COTTON	bleach	Re-Dyeing	Cut Fabric	21	419.40
JSX001	0164	fabric	TC	off-white	Dyeing	Cut Fabric	24	522.10
JSX001	0165	fabric	TC	off-white	Dyeing	Cut Fabric	24	518.00
PLK001	0330A	fabric	POLY	red	Dyeing	Cut Fabric	20	451.40
PLK001	0334A	fabric	TK	yellow	Dyeing	Cut Fabric	30	681.10
ITC001	3469A	fabric	COTTON	cream	Dyeing	Cut Fabric	8	171.20
ITC001	3478	fabric	CVC	bleach	Dyeing	Cut Fabric	2	43.10

CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	Finishing	UNIT	WEIGHTALL
ITC001	3478	fabric	CVC	red	Dyeing	Cut Fabric	3	64.70
ITC001	3479	fabric	CVC	navy blue	Dyeing	Cut Fabric	5	107.70
ITC001	3479	fabric	CVC	orange	Dyeing	Cut Fabric	1	21.60
ITC001	3480A	fabric	COTTON	scour	Dyeing	Cut Fabric	18	384.90
ITC001	930800	fabric	COTTON	yellow	Re-Dyeing	Cut Fabric	12	232.90
ITC001	930801	fabric	CVC	cream	Re-Finishing	Cut Fabric	20	417.40
ITC001	930803	fabric	CVC	maroon	Re-Finishing	Cut Fabric	3	60.30
MTX001	4438	fabric	CVC	navy blue	Re-Dyeing	Cut Fabric	14	280.60
MTX001	4436	fabric	CVC	navy blue	Re-Dyeing	Cut Fabric	16	316.10
MTX001	4437	fabric	CVC	navy blue	Re-Dyeing	Cut Fabric	5	99.80
TBK001	00354	fabric	TK	bleach	Dyeing	Cut Fabric	6	123.10
PKF001	2214/297	fabric	COTTON	bleach	Dyeing	Cut Fabric	7	156.14
LLN001	P6238	fabric	TC	off-white	Dyeing	Cut Fabric	7	143.80
SPG001	290	fabric	NYLON	black	Re-Finishing	Cut Fabric	1	17.50
ASS001	0940	fabric	NYLON DS-075/1	black	Dyeing	Cut Fabric	43	865.30
ASS001	0940	fabric	NYLON DS-075/1	black	Dyeing	Cut Fabric	10	201.20
ASS001	0940	fabric	NYLON DS-075/1	brown	Dyeing	Cut Fabric	10	201.20
ASS001	0940	fabric	NYLON DS-075/1	navy blue	Dyeing	Cut Fabric	5	100.60
ASS001	4963	fabric	NYLON DS-175	black	Dyeing	Cut Fabric	16	323.30
KTK001	0197	fabric	CVC	navy blue	Re-Dyeing	Cut Fabric	23	494.50
KTK001	0189	fabric	CVC	blue	Re-Dyeing	Cut Fabric	9	162.00

CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	Finishing	UNIT	WEIGHTALL
ESO001	DS20	fabric	POLY	bleach	Re-Finishing	Cut Fabric	1	11.00
YHL001	2382	fabric	CVC	blue	Dyeing	Cut Fabric	24	503.00
YHL001	2392	fabric	TC	violet	Dyeing	Cut Fabric	25	512.90
MTX001	0013	fabric	CVC	bleach	Dyeing	Cut Fabric	27	572.70
KTK001	0190	fabric	COTTON	knaki	Dyeing	Cut Fabric	1	10.00
KTK001	0191	fabric	COTTON	navy blue	Finishing	Cut Fabric	2	40.00
KTK001	0198	fabric	TC	yellow	Dyeing	Cut Fabric	15	318.80
KTK001	0192	fabric	COTTON	bleach	Dyeing	Cut Fabric	4	73.70
KTK001	0193	fabric	TC	navy blue	Dyeing	Cut Fabric	7	152.00
KTK001	0194	fabric	TC	bleach	Dyeing	Cut Fabric	17	371.40
KTK001	0195	fabric	COTTON	blue	Dyeing	Cut Fabric	25	495.20
KTK001	0196	fabric	CVC	navy blue	Dyeing	Cut Fabric	26	539.60
TBK001	00359	fabric	TK	yellow	Re-Finishing	Cut Fabric	10	212.70
TBK001	00359	fabric	TK	cream	Re-Finishing	Cut Fabric	5	104.30
TMT001	1153	fabric	TC	pink	Re-Finishing	Cut Fabric	11	214.10
TBK001	00360	fabric	TC+T	black	Dyeing	Cut Fabric	6	123.00
ITC001	3483	fabric	COTTON	green	Dyeing	Cut Fabric	18	394.20
ITC001	3484A	fabric	CVC	navy blue	Dyeing	Cut Fabric	15	322.90
ITC001	930807	fabric	TK	gray	Re-Dyeing	Cut Fabric	15	315.70

## Gas Finishing Machine

CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	Finishing	UNIT	WEIGHTALL
YHL001	2369	fabric	TC	off-white	Dyeing	Gas	3	65.60
MTX001	4297A	fabric	TK	bleach	Dyeing	Gas	5	101.80
MTX001	4291	fabric	TOP	scour	Dyeing	Gas	10	200.30
MTX001	4293	rip	TC	violet	Dyeing	Gas	15	304.70
MTX001	4293	rip	TC	pink	Dyeing	Gas	15	304.70
MTX001	4293	rip	TC	yellow	Dyeing	Gas	20	406.20
MTX001	4298A	fabric	TK	green	Dyeing	Gas	5	103.10
MTX001	4298A	rip	TK	green	Dyeing	Gas	1	4.90
MTX001	4298A	collar	TK	green	Dyeing	Gas	1	12.40
MTX001	4298A	fabric	TK	brown	Dyeing	Gas	5	103.10
MTX001	4298A	rip	TK	brown	Dyeing	Gas	1	4.80
MTX001	4298A	collar	TK	brown	Dyeing	Gas	1	12.80
MTX001	4298A	fabric	TK	knaki	Dyeing	Gas	5	103.10
MTX001	4298A	rip	TK	knaki	Dyeing	Gas	1	4.80
MTX001	4298A	collar	TK	knaki	Dyeing	Gas	1	12.00
MTX001	4298A	fabric	TK	gray	Dyeing	Gas	5	103.10
MTX001	4298A	rip	TK	gray	Dyeing	Gas	1	6.00

CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	Finishing	UNIT	WEIGHTALL
MTX001	4298A	collar	TK	gray	Dyeing	Gas	1	12.00
MTX001	4294	fabric	TC+T	navy blue	Dyeing	Gas	10	211.90
MTX001	4294	fabric	TC+T	black	Dyeing	Gas	10	211.90
MTX001	4294	fabric	TC+T	cream	Dyeing	Gas	10	212.00
MTX001	4295	fabric	TR	yellow	Dyeing	Gas	10	214.00
MTX001	4295	fabric	TR	blue	Dyeing	Gas	10	214.10
HJX001	434	rip	POLY	red	Dyeing	Gas	1	14.10
HJX001	0082	fabric	POLY	red	Dyeing	Gas	9	147.80
HJX001	0082	fabric	POLY	green	Dyeing	Gas	9	147.80
HJX001	0082	fabric	POLY	blue	Dyeing	Gas	9	147.80
HJX001	0082	fabric	POLY	yellow	Dyeing	Gas	5	82.10
JSX001	01	fabric	TC	pink	Finishing	Gas	1	20.60
JSX001	0166	fabric	TR	mustard	Dyeing	Gas	10	208.20
JSX001	0167	fabric	TR	blue	Dyeing	Gas	10	208.10
PLK001	0330A	rip	POLY	red	Dyeing	Gas	2	23.50
PLK001	0334A	rip	TK	yellow	Dyeing	Gas	3	44.20
SEK001	0219	fabric	CVC	green	Dyeing	Gas	15	285.60
ITC001	3479	rip	CVC	navy blue	Dyeing	Gas	1	9.10
ITC001	3479	rip	CVC	orange	Dyeing	Gas	1	11.60
MTX001	4888A	rip	TOP	gray	Finishing	Gas	1	19.50
MTX001	4435	fabric	TC+TOP	gray	Finishing	Gas	20	408.60

CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	Finishing	UNIT	WEIGHTALL
MTX001	4439	fabric	CVC	yellow	Re-Finishing	Gas	2	31.80
MTX001	4439	fabric	CVC	gray	Re-Finishing	Gas	1	9.00
MTX001	4439	fabric	CVC	orange	Re-Finishing	Gas	1	19.30
LLN001	P6249	fabric	POLY	green	Dyeing	Gas	5	102.10
LLN001	P6248	fabric	POLY	pink	Dyeing	Gas	5	101.62
SEX001	0462	fabric	TK	brown	Dyeing	Gas	20	428.70
SEX001	0462	rip	TK	brown	Dyeing	Gas	1	12.00
SEX001	0461	fabric	TK	cream	Dyeing	Gas	20	428.60
SEX001	0461	rip	TK	cream	Dyeing	Gas	1	12.00
SEX001	0461	fabric	TK	blue	Dyeing	Gas	20	428.60
SEX001	0461	rip	TK	blue	Dyeing	Gas	1	12.00
SEX001	0461	fabric	TK	navy blue	Dyeing	Gas	25	535.70
SEX001	0461	rip	TK	navy blue	Dyeing	Gas	1	15.00
SEX001	0461	fabric	TK	red	Dyeing	Gas	15	321.50
SEX001	0461	rip	TK	red	Dyeing	Gas	1	9.00
SEX001	0468	fabric	TK	bleach	Dyeing	Gas	20	409.80
SEX001	0468	rip	TK	bleach	Dyeing	Gas	1	9.10
SEX001	0468	collar	TK	bleach	Dyeing	Gas	1	9.10
SEX001	0467	fabric	TK	red	Dyeing	Gas	15	318.40
SEX001	0467	rip	TK	red	Dyeing	Gas	1	11.00
SEX001	0467	collar	TK	red	Dyeing	Gas	1	9.20

CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	Finishing	UNIT	WEIGHTALL
SEX001	0467	fabric	TK	cream	Dyeing	Gas	15	318.40
SEX001	0467	rip	TK	cream	Dyeing	Gas	1	11.00
SEX001	0467	collar	TK	cream	Dyeing	Gas	1	10.20
JKX001	4106	fabric	POLY	off-white	Dyeing	Gas	22	431.40
JKX001	4105	fabric	POLY	off-white	Dyeing	Gas	18	414.10
TAL001	0203	fabric	POLY	off-white	Dyeing	Gas	62	1158.00
SEX001	0470	fabric	TK	navy blue	Dyeing	Gas	10	216.40
SEX001	0470	fabric	TK	black	Dyeing	Gas	10	216.50
CPI001	0260	fabric	TK	navy blue	Dyeing	Gas	23	460.00
CPI001	0265	rip	TK	black	Dyeing	Gas	2	40.30
CPI001	0267	fabric	TK	gray	Dyeing	Gas	23	467.80
CPI001	0263	fabric	TK	green	Dyeing	Gas	10	213.50
CPI001	0263	rip	TK	green	Dyeing	Gas	1	20.40
CPI001	0263	fabric	TK	beige	Dyeing	Gas	10	213.50
CPI001	0263	rip	TK	beige	Dyeing	Gas	1	20.20
SEX001	0469	fabric	CVC	pink	Dyeing	Gas	4	80.00
YHL001	2383	rip	CVC	bleach	Dyeing	Gas	2	40.80
YHL002	4964	rip	TC	green	Dyeing	Gas	2	31.20
YHL002	4964	rip	TC	yellow	Dyeing	Gas	2	36.70
YHL002	4964	rip	TC	orange	Dyeing	Gas	2	26.00
YHL002	4970A	fabric	TC	red	Dyeing	Gas	8	163.40



CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	Finishing	UNIT	WEIGHTALL
YHL002	4970A	fabric	TC	navy blue	Dyeing	Gas	7	151.20
YHL002	4979	fabric	TC	cream	Dyeing	Gas	6	135.40
YHL002	4979	rip	TC	cream	Dyeing	Gas	1	10.00
BIX001	24/02	fabric	TC+T	navy blue	Dyeing	Gas	15	304.30
BIX001	24/02	rip	TC+T	navy blue	Dyeing	Gas	1	23.40
BIX001	24/02	fabric	TC+T	black	Dyeing	Gas	15	304.40
BIX001	24/02	rip	TC+T	black	Dyeing	Gas	1	23.40
YHL001	2393	fabric	TC	pink	Dyeing	Gas	16	324.80
MTX001	0028	fabric	TK	navy blue	Dyeing	Gas	5	102.60
MTX001	0028	rip	TK	navy blue	Dyeing	Gas	1	5.50
MTX001	0028	collar	TK	navy blue	Dyeing	Gas	1	12.00
MTX001	0008	fabric	TR	blue	Dyeing	Gas	5	104.20
MTX001	0014	fabric	TC	scour	Dyeing	Gas	20	441.50
MTX001	4299	fabric	TK	navy blue	Dyeing	Gas	15	301.30
MTX001	4299	fabric	TK	black	Dyeing	Gas	15	301.30
KTK001	0193	rip	TC	navy blue	Dyeing	Gas	3	52.00
KTK001	0194	rip	TC	bleach	Dyeing	Gas	2	31.40
LLN001	P6253	fabric	POLY	green	Dyeing	Gas	5	106.16
LLN001	P6254	fabric	POLY	pink	Dyeing	Gas	10	207.70
MTX001	0011	fabric	TK	bleach	Dyeing	Gas	15	301.10
MTX001	0012	fabric	TOP	scour	Dyeing	Gas	20	411.50

CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	Finishing	UNIT	WEIGHTALL
MTX001	0029	fabric	TK	off-white	Dyeing	Gas	10	206.10
MTX001	0030	fabric	POLY+TOP	scour	Dyeing	Gas	20	410.50
TAL001	0205	fabric	POLY	off-white	Dyeing	Gas	33	616.30

Steam Finishing Machine - only cotton fabric

CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	Finishing	UNIT	WEIGHTALL
YHL001	2179	rip	COTTON	cream	Re-Dyeing	Steam	2	25.60
KTK001	0180	rip	COTTON	knaki	Dyeing	Steam	1	8.80
KTK001	0180	collar	COTTON	knaki	Dyeing	Steam	1	1.50
KTK001	0180	sleeve	COTTON	knaki	Dyeing	Steam	1	1.00
PKF001	2212/283RE	rip	COTTON	bleach	Re-Dyeing	Steam	2	40.50
SEX001	0436RT2	fabric	COTTON	gray	Dyeing	Steam	2	36.70
SEX001	0436RT2	rip	COTTON	gray	Dyeing	Steam	1	8.70
ITC001	930800	rip	COTTON	yellow	Re-Dyeing	Steam	1	14.90
SEX001	0466	fabric	COTTON	yellow	Dyeing	Steam	8	166.50
SEX001	0466	rip	COTTON	yellow	Dyeing	Steam	1	8.00
SEX001	0466	fabric	COTTON	knaki	Dyeing	Steam	8	166.60
SEX001	0466	rip	COTTON	knaki	Dyeing	Steam	1	8.00
ITC001	3483	rip	COTTON	green	Dyeing	Steam	2	33.00
ITC001	3483	rip	COTTON	green	Dyeing	Steam	3	49.50

**Step 5.1 and 6** : Sequence the order in Cut Fabric Finishing machine(5.1)  
and Calculate the reference release time (6).

Group the orders In the same temperature of Finishing process  
and Sum of Processing time in each temperature

Temperature	Pt
150c	2448
160c	819.6
165c	1446

Mean Processing Time per Machine =2356.9

So the sequence of orders in each machine are allocated as

M1	M2
150c	160c
	165c

Finally, calculate the reference release time in Finishing machine

## Cut Fabric Finishing Machine



## Machine 1 - 150 C

CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	Finishing	Pt	TF
ITC001	3480A	fabric	COTTON	scour	Dyeing	Cut Fabric	140.4	0
KTK001	0192	fabric	COTTON	bleach	Dyeing	Cut Fabric	31.2	195.4
PKF001	2213/283R	rip	COTTON	bleach	Re-Dyeing	Cut Fabric	179.4	271.6
PKF001	2212/283R	rip	COTTON	bleach	Re-Dyeing	Cut Fabric	163.8	466
MTX001	0013	fabric	CVC	bleach	Dyeing	Cut Fabric	126.9	637.9
PKF001	2214/297	fabric	COTTON	bleach	Dyeing	Cut Fabric	54.6	846.7
ITC001	930801	fabric	CVC	cream	Re-Finishing	Cut Fabric	94	946.3
ITC001	930803	fabric	CVC	maroon	Re-Finishing	Cut Fabric	14.1	1085.3
KTK001	0181	fabric	CVC	red	Re-Dyeing	Cut Fabric	42.3	1144.4
MTX001	4438	fabric	CVC	navy blue	Re-Dyeing	Cut Fabric	65.8	1231.7
MTX001	4436	fabric	CVC	navy blue	Re-Dyeing	Cut Fabric	75.2	1312.5
MTX001	4437	fabric	CVC	navy blue	Re-Dyeing	Cut Fabric	23.5	1402.7
KTK001	0178	fabric	CVC	yellow	Re-Dyeing	Cut Fabric	70.5	1471.7
KTK001	0179	fabric	CVC	bleach	Re-Finishing	Cut Fabric	75.2	1557.2
ITC001	930800	fabric	COTTON	yellow	Re-Dyeing	Cut Fabric	93.6	1677.4
KTK001	0189	fabric	CVC	blue	Re-Dyeing	Cut Fabric	42.3	1816
YHL001	2180	fabric	COTTON	bleach	Dyeing	Cut Fabric	54.6	1903.3
KTK001	0197	fabric	CVC	navy blue	Re-Dyeing	Cut Fabric	108.1	2002.9
YHL001	2361	fabric	CVC	blue	Dyeing	Cut Fabric	108.1	2156
YHL001	2382	fabric	CVC	blue	Dyeing	Cut Fabric	112.8	2279.1
KTK001	0195	fabric	COTTON	blue	Dyeing	Cut Fabric	195	2436.9
ITC001	3483	fabric	COTTON	green	Dyeing	Cut Fabric	140.4	2676.8
YHL001	2368	fabric	CVC	knaki	Dyeing	Cut Fabric	9.4	2862.3
KTK001	0196	fabric	CVC	navy blue	Dyeing	Cut Fabric	122.2	2916.7
KTK001	0188	fabric	CVC	navy blue	Dyeing	Cut Fabric	42.3	3083.9
ITC001	3469A	fabric	COTTON	cream	Dyeing	Cut Fabric	62.4	3171.2
ITC001	3479	fabric	CVC	orange	Dyeing	Cut Fabric	4.7	3248.6

CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	Finishing	Pt	TF
ITC001	3478	fabric	CVC	red	Dyeing	Cut Fabric	14.1	3268.3
ITC001	3479	fabric	CVC	navy blue	Dyeing	Cut Fabric	23.5	3297.4
ITC001	3484A	fabric	CVC	navy blue	Dyeing	Cut Fabric	70.5	3335.9
ITC001	3478	fabric	CVC	bleach	Dyeing	Cut Fabric	9.4	3421.4
KTK001	0182	fabric	COTTON	bleach	Dyeing	Cut Fabric	39	3475.8
KTK001	0183	fabric	COTTON	blue	Dyeing	Cut Fabric	15.6	3529.8
KTK001	0183	fabric	COTTON	yellow	Dyeing	Cut Fabric	7.8	3560.4
KTK001	0190	fabric	COTTON	knaki	Dyeing	Cut Fabric	7.8	3613.2
KTK001	0180	fabric	COTTON	knaki	Dyeing	Cut Fabric	7.8	3666

## Cut Fabric Finishing Machine

## Machine 2 - 160c and 165c

CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	Finishing	Pt	TF	Temp.
JSX001	0164	fabric	TC	off-white	Dyeing	Cut Fabric	100.8	0	160c
JSX001	0165	fabric	TC	off-white	Dyeing	Cut Fabric	100.8	115.8	
TMT001	1153	fabric	TC	pink	Re-Finishing	Cut Fabric	46.2	261.6	
YHL001	2181	fabric	TC	bleach	Re-Dyeing	Cut Fabric	50.4	352.8	
LLN001	P6238	fabric	TC	off-white	Dyeing	Cut Fabric	29.4	448.2	
KTK001	0039	fabric	TC	bleach	Dyeing	Cut Fabric	4.2	522.6	
KTK001	0191	fabric	COTTON	navy blue	Finishing	Cut Fabric	15.6	571.6	
KTK001	0184	fabric	COTTON	navy blue	Dyeing	Cut Fabric	31.2	631.8	
KTK001	0193	fabric	TC	navy blue	Dyeing	Cut Fabric	29.4	708	
KTK001	0194	fabric	TC	bleach	Dyeing	Cut Fabric	71.4	752.4	
KTK001	0187	fabric	TC	pink	Dyeing	Cut Fabric	84	868.8	
TBK001	00360	fabric	TC+T	black	Dyeing	Cut Fabric	25.2	997.8	
KTK001	0198	fabric	T C	yellow	Dyeing	Cut Fabric	63	1068	
KTK001	0185	fabric	TC	pink	Dyeing	Cut Fabric	63	1146	
YHL001	2392	fabric	TC	violet	Dyeing	Cut Fabric	105	1254	
SPG001	290	fabric	NYLON	black	Re-Finishing	Cut Fabric	4.7	1419	165c
TBK001	00359	fabric	TK	yellow	Re-Finishing	Cut Fabric	48	1468.7	
TBK001	00359	fabric	TK	cream	Re-Finishing	Cut Fabric	24	1531.7	
ESO001	DS20	fabric	POLY	bleach	Re-Finishing	Cut Fabric	4.8	1600.7	
MTX001	4296	fabric	POLY	bleach	Dyeing	Cut Fabric	110.4	1650.5	
TBK001	00354	fabric	TK	bleach	Dyeing	Cut Fabric	28.8	1805.5	
ITC001	930807	fabric	TK	gray	Re-Dyeing	Cut Fabric	72	1879.7	
ASS001	0940	fabric	NYLON DS-075/1	brown	Dyeing	Cut Fabric	47	1996.7	
ASS001	0940	fabric	NYLON DS-075/1	black	Dyeing	Cut Fabric	202.1	2058.7	
ASS001	4963	fabric	NYLON DS-175	black	Dyeing	Cut Fabric	75.2	2275.8	
ASS001	0940	fabric	NYLON DS-075/1	black	Dyeing	Cut Fabric	47	2366	
ASS001	0940	fabric	NYLON DS-075/1	navy blue	Dyeing	Cut Fabric	23.5	2428	

CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	Finishing	Pt	TF	Temp.
TBK001	00317	fabric	TK	yellow	Dyeing	Cut Fabric	48	2496.5	165c
TBK001	00317	fabric	TK	green	Dyeing	Cut Fabric	48	2559.5	
TBK001	00317	fabric	TK	tartar	Dyeing	Cut Fabric	48	2622.5	
TBK001	00317	fabric	TK	red	Dyeing	Cut Fabric	48	2685.5	
TBK001	00317	fabric	TK	brown	Dyeing	Cut Fabric	48	2748.5	
TBK001	00317	fabric	TK	navy blue	Dyeing	Cut Fabric	48	2811.5	
HJX001	0082	fabric	POLY	navy blue	Dyeing	Cut Fabric	28.8	2904.5	
HJX001	0082	fabric	POLY	black	Dyeing	Cut Fabric	57.6	2948.3	
PLK001	0334A	fabric	TK	yellow	Dyeing	Cut Fabric	144	3050.9	
PLK001	0330A	fabric	POLY	red	Dyeing	Cut Fabric	96	3209.9	
HJX001	0124	fabric	POLY	navy blue	Dyeing	Cut Fabric	48	3350.9	
HJX001	0124	fabric	POLY	blue	Dyeing	Cut Fabric	48	3413.9	
HJX001	0124	fabric	POLY	black	Dyeing	Cut Fabric	48	3476.9	



**Step 5.2 and 6** : Sequence the orders in Gas Finishing machine (5.2)  
and Calculate the reference release time (6).

Group the orders according to the width of fabric and Sum of Processing time

Type of fabric	the width	Pt
All	$w > 41$	2498
TC	$28 \leq w \leq 41$	2016
TK	$28 \leq w \leq 41$	2504
others	$28 \leq w \leq 41$	1301

Mean processing time per machine = 2079.73

So, the orders in width  $> 41$  and width TK  $28 \leq w \leq 41$  must be separated

The orders are allocated as

Machine	Width
M1	$w > 41$
M2	TC $28 \leq w \leq 41$
M3	TK $28 \leq w \leq 41$
M4	Seperated $w > 41$ Seperated TK $28 \leq w \leq 41$ Poly, TOP, TR $28 \leq w \leq 41$

Finally, calculate the reference release time in Finishing machine

## Gas Finishing Machine

M1 : w>41

CUSNO	ORDNO	PRODUCT	COLOR	Work	HI	Pt	TF
MTX001	4439	CVC	gray	Re-Finishing	48	15.3	0
MTX001	4439	CVC	orange	Re-Finishing	48	15.3	20.3
MTX001	4439	CVC	yellow	Re-Finishing	48	30.6	40.6
TAL001	0203	POLY	off-white	Dyeing	50	694.4	91.2
TAL001	0205	POLY	off-white	Dyeing	50	369.6	790.6
JKX001	4106	POLY	off-white	Dyeing	50	246.4	1180.2
JKX001	4105	POLY	off-white	Dyeing	50	201.6	1431.6
JSX001	0166	TR	mustard	Dyeing	46	143	1653.2
JSX001	0167	TR	blue	Dyeing	46	143	1801.2
LLN001	P6249	POLY	green	Dyeing	46	56	1964.2
LLN001	P6253	POLY	green	Dyeing	46	56	1964.2
LLN001	P6254	POLY	pink	Dyeing	46	112	2081.2
LLN001	P6248	POLY	pink	Dyeing	46	56	2081.2

## Gas Finishing Machine

M2 : Tc 28<=w<=41

CUSNO	ORDNO	PRODUCT	COLOR	Work	HI	Pt	TF
MTX001	4435	TC+TOP	gray	Finishing	38	286	0
MTX001	0014	TC	scour	Dyeing	38	286	306
JSX001	01	TC	pink	Finishing	37	14.3	612
YHL002	4970A	TC	red	Dyeing	37	114.4	646.3
YHL002	4970A	TC	navy blue	Dyeing	37	100.1	765.7
BIX001	24/02	TC+T	black	Dyeing	36	214.5	885.8
BIX001	24/02	TC+T	navy blue	Dyeing	36	214.5	1105.3
YHL001	2393	TC	pink	Dyeing	36	228.8	1339.8
YHL002	4979	TC	cream	Dyeing	32	85.8	1588.6
YHL001	2369	TC	off-white	Dyeing	36	42.9	1694.4
MTX001	4294	TC+T	cream	Dyeing	39	143	1757.3
MTX001	4294	TC+T	navy blue	Dyeing	39	143	1905.3
MTX001	4294	TC+T	black	Dyeing	39	143	2053.3

## Gas Finishing Machine

M3 : TK 28<=w<=41

CUSNO	ORDNO	PRODUCT	COLOR	Work	HI	Pt	TF
MTX001	4297A	TK	bleach	Dyeing	36	39	0
SEX001	0468	TK	bleach	Dyeing	36	156	59
SEX001	0467	TK	cream	Dyeing	36	117	220
SEX001	0467	TK	red	Dyeing	36	117	342
SEX001	0461	TK	red	Dyeing	36	117	479
SEX001	0462	TK	brown	Dyeing	36	156	601
SEX001	0461	TK	navy blue	Dyeing	36	195	762
SEX001	0461	TK	blue	Dyeing	36	156	962
SEX001	0461	TK	cream	Dyeing	36	156	1123
CPI001	0267	TK	gray	Dyeing	37	179.4	1299
CPI001	0260	TK	navy blue	Dyeing	37	179.4	1483.4
CPI001	0263	TK	green	Dyeing	37	78	1682.8
CPI001	0263	TK	beige	Dyeing	37	78	1765.8
MTX001	0011	TK	bleach	Dyeing	39	117	1863.8
MTX001	4298A	TK	knaki	Dyeing	39	39	2000.8
MTX001	4298A	TK	green	Dyeing	39	39	2044.8
MTX001	4298A	TK	gray	Dyeing	39	39	2088.8
MTX001	4298A	TK	brown	Dyeing	39	39	2132.8
MTX001	0028	TK	navy blue	Dyeing	39	39	2176.8

## Gas Finishing Machine

M4 : CVC,Poly, TOP and TR  $28 \leq w \leq 41$ ,

seperated TK  $28 \leq w \leq 41$

and seperated  $w > 41$

CUSNO	ORDNO	PRODUCT	COLOR	Work	HI	Pt	TF	
MTX001	0012	TOP	scour	Dyeing	39	286	0	CVC,TC, TOP and TR $28 \leq w \leq 41$ and seperated TK $28 \leq w \leq 41$
MTX001	0030	POLY+TOP	scour	Dyeing	39	224	306	
MTX001	4291	TOP	scour	Dyeing	38	143	550	
MTX001	0029	TK	off-white	Dyeing	38	78	713	
MTX001	4299	TK	navy blue	Dyeing	38	117	811	
MTX001	4299	TK	black	Dyeing	38	117	933	
SEX001	0470	TK	navy blue	Dyeing	38	78	1070	
SEX001	0470	TK	black	Dyeing	38	78	1153	
MTX001	4295	TR	blue	Dyeing	36.5	143	1251	
MTX001	0008	TR	blue	Dyeing	36.5	71.5	1399	
MTX001	4295	TR	yellow	Dyeing	36.5	143	1475.5	
SEK001	0219	CVC	green	Dyeing	35	229.5	1638.5	
SEX001	0469	CVC	pink	Dyeing	34	61.2	1888	
HJX001	0082	POLY	yellow	Dyeing	51	56	2009.2	
HJX001	0082	POLY	blue	Dyeing	51	100.8	2070.2	
HJX001	0082	POLY	green	Dyeing	51	100.8	2176	
HJX001	0082	POLY	red	Dyeing	51	100.8	2281.6	

**Step 7 and 8** : Classify Dyeing orders (7) and Allocate the orders to the groups of Dyeing machine (8)

CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	HI	UNIT	WEIGHTALL	total W.	dye M.
KTK001	0039	fabric	TC	bleach	Dyeing	72	1	12.30		W40
KTK001	0183	fabric	COTTON	blue	Dyeing	72	2	41.70		W40
KTK001	0183	fabric	COTTON	yellow	Dyeing	72	1	21.90		W40
KTK001	0180	fabric	COTTON	knaki	Dyeing	88	1	17.90	29.20	W40
KTK001	0180	rip	COTTON	knaki	Dyeing	28	1	8.80		
KTK001	0180	collar	COTTON	knaki	Dyeing	28	1	1.50		
KTK001	0180	sleeve	COTTON	knaki	Dyeing	28	1	1.00		
ITC001	3478	fabric	CVC	bleach	Dyeing	84	2	43.10	45.40	W40
YHL001	2383	rip	CVC	bleach	Dyeing	22	2	40.80		W40
KTK001	0190	fabric	COTTON	knaki	Dyeing	72	1	10.00		W40
YHL001	2179	rip	COTTON	cream	Re-Dyeing	20	2	25.60		W40
YHL001	2369	fabric	TC	off-white	Dyeing	36	3	65.60		W100
SEX001	0436RT2	fabric	COTTON	gray	Dyeing	24	2	36.70		W100
SEX001	0436RT2	rip	COTTON	gray	Dyeing	24	1	8.70		
KTK001	0192	fabric	COTTON	bleach	Dyeing	78	4	73.70		W100
MTX001	4291	fabric	TOP	scour	Dyeing	38	10	200.30		W200
ITC001	3480A	fabric	COTTON	scour	Dyeing	80	18	384.90		W400

CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	HI	UNIT	WEIGHTALL	total W.	dye M.
MTX001	0014	fabric	TC	scour	Dyeing	38	20	441.50		W400
MTX001	0012	fabric	TOP	scour	Dyeing	39	20	411.50		W400
MTX001	0030	fabric	POLY+TOP	scour	Dyeing	39	20	410.50		W400
YHL001	2180	fabric	COTTON	bleach	Dyeing	72	7	126.70		RW200
KTK001	0184	fabric	COTTON	navy blue	Dyeing	72	4	87.40		RW200
KTK001	0182	fabric	COTTON	bleach	Dyeing	72	5	108.20		RW200
MTX001	4297A	fabric	TK	bleach	Dyeing	36	5	101.80		RW200
ITC001	3469A	fabric	COTTON	cream	Dyeing	60	8	171.20		RW200
TBK001	00354	fabric	TK	bleach	Dyeing	77	6	123.10		RW200
PKF001	2214/297	fabric	COTTON	bleach	Dyeing	68	7	156.14		RW200
LLN001	P6238	fabric	TC	off-white	Dyeing	74	7	143.80		RW200
LLN001	P6249	fabric	POLY	green	Dyeing	46	5	102.10		RW200
SEX001	0466	fabric	COTTON	yellow	Dyeing	18	8	166.50	174.50	RW200
SEX001	0466	rip	COTTON	yellow	Dyeing	22	1	8.00		
SEX001	0466	fabric	COTTON	knaki	Dyeing	18	8	166.60	174.60	RW200
SEX001	0466	rip	COTTON	knaki	Dyeing	22	1	8.00		
ASS001	0940	fabric	YLON DS-075/	navy blue	Dyeing	60	5	100.60		RW200
MTX001	4296	fabric	POLY	bleach	Dyeing	74	23	474.80		RW400
SEX001	0468	fabric	TK	bleach	Dyeing	36	20	409.80		
SEX001	0468	rip	TK	bleach	Dyeing	26	1	9.10	428.00	RW400
SEX001	0468	collar	TK	bleach	Dyeing	26	1	9.10		

CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	HI	UNIT	WEIGHTALL	total W.	dye M.
ASS001	4963	fabric	NYLON DS-175	black	Dyeing	60	16	323.30		RW400
ASS001	0940	fabric	NYLON DS-075/	black	Dyeing	60	10	201.20		RW400
ASS001	0940	fabric	NYLON DS-075/	brown	Dyeing	60	10	201.20		RW400
KTK001	0194	fabric	TC	bleach	Dyeing	72	17	371.40	402.80	RW400
KTK001	0194	rip	TC	bleach	Dyeing	30	2	31.40		
ITC001	3483	fabric	COTTON	green	Dyeing	68	18	394.20		
ITC001	3483	rip	COTTON	green	Dyeing	28	2	33.00	476.70	RW400
ITC001	3483	rip	COTTON	green	Dyeing	28	3	49.50		
MTX001	0011	fabric	TK	bleach	Dyeing	39	15	301.10		RW400
MTX001	0029	fabric	TK	off-white	Dyeing	38	10	206.10		RW400
YHL001	2181	fabric	TC	bleach	Re-Dyeing	84	12	223.30		RW400
ITC001	930800	fabric	COTTON	yellow	Re-Dyeing	62	12	232.90		
ITC001	930800	rip	COTTON	yellow	Re-Dyeing	31	1	14.90	232.90	RW400
YHL001	2368	fabric	CVC	knaki	Dyeing	68	2	36.80		HT40
ITC001	3479	fabric	CVC	orange	Dyeing	84	1	21.60	33.20	HT40
ITC001	3479	rip	CVC	orange	Dyeing	24	1	11.60		
CPI001	0265	rip	TK	black	Dyeing	30	2	40.30		HT40
YHL002	4964	rip	TC	green	Dyeing	18	2	31.20		HT40
YHL002	4964	rip	TC	yellow	Dyeing	18	2	36.70		HT40
YHL002	4964	rip	TC	orange	Dyeing	18	2	26.00		HT40
KTK001	0188	fabric	CVC	navy blue	Dyeing	65	9	180.50		HT200



CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	HI	UNIT	WEIGHTALL	total W.	dye M.
MTX001	4298A	fabric	TK	green	Dyeing	39	5	103.10	120.00	HT200
MTX001	4298A	rip	TK	green	Dyeing	28	1	4.90		
MTX001	4298A	collar	TK	green	Dyeing	28	1	12.40		
MTX001	4298A	fabric	TK	brown	Dyeing	39	5	103.10	120.70	HT200
MTX001	4298A	rip	TK	brown	Dyeing	28	1	4.80		
MTX001	4298A	collar	TK	brown	Dyeing	28	1	12.80		
MTX001	4298A	fabric	TK	knaki	Dyeing	39	5	103.10	119.90	HT200
MTX001	4298A	rip	TK	knaki	Dyeing	28	1	4.80		
MTX001	4298A	collar	TK	knaki	Dyeing	28	1	12.00		
MTX001	4298A	fabric	TK	gray	Dyeing	39	5	103.10	121.10	HT200
MTX001	4298A	rip	TK	gray	Dyeing	28	1	6.00		
MTX001	4298A	collar	TK	gray	Dyeing	28	1	12.00		
TBK001	00317	fabric	TK	red	Dyeing	64	10	192.60		HT200
TBK001	00317	fabric	TK	brown	Dyeing	64	10	192.60		HT200
TBK001	00317	fabric	TK	tartar	Dyeing	64	10	192.60		HT200
TBK001	00317	fabric	TK	navy blue	Dyeing	64	10	192.60		HT200
TBK001	00317	fabric	TK	yellow	Dyeing	64	10	192.60		HT200
TBK001	00317	fabric	TK	green	Dyeing	64	10	192.60		HT200
HJX001	434	rip	POLY	red	Dyeing	32	1	14.10	161.90	HT200
HJX001	0082	fabric	POLY	red	Dyeing	51	9	147.80		
HJX001	0082	fabric	POLY	green	Dyeing	51	9	147.80		

CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	HI	UNIT	WEIGHTALL	total W.	dye M.
HJX001	0082	fabric	POLY	blue	Dyeing	51	9	147.80		HT200
HJX001	0082	fabric	POLY	yellow	Dyeing	51	5	82.10		HT200
HJX001	0082	fabric	POLY	navy blue	Dyeing	90	6	98.50		HT200
HJX001	0082	fabric	POLY	black	Dyeing	90	12	197.20		HT200
JSX001	0166	fabric	TR	mustard	Dyeing	46	10	208.20		HT200
JSX001	0167	fabric	TR	blue	Dyeing	46	10	208.10		HT200
ITC001	3478	fabric	CVC	red	Dyeing	84	3	64.70		HT200
ITC001	3479	fabric	CVC	navy blue	Dyeing	84	5	107.70	116.80	HT200
ITC001	3479	rip	CVC	navy blue	Dyeing	24	1	9.10		
LLN001	P6248	fabric	POLY	pink	Dyeing	46	5	101.62		HT200
SEX001	0469	fabric	CVC	pink	Dyeing	34	4	80.00		HT200
YHL002	4970A	fabric	TC	red	Dyeing	37	8	163.40		HT200
YHL002	4970A	fabric	TC	navy blue	Dyeing	37	7	151.20		HT200
YHL002	4979	fabric	TC	cream	Dyeing	32	6	135.40	136.40	HT200
YHL002	4979	rip	TC	cream	Dyeing	18	1	10.00		
MTX001	0008	fabric	TR	blue	Dyeing	36.5	5	104.20		HT200
KTK001	0193	fabric	TC	navy blue	Dyeing	72	7	152.00	204.00	HT200
KTK001	0193	rip	TC	navy blue	Dyeing	30	3	52.00		
TBK001	00360	fabric	TC+T	black	Dyeing	77	6	123.00		HT200
LLN001	P6253	fabric	POLY	green	Dyeing	46	5	106.16		HT200
LLN001	P6254	fabric	POLY	pink	Dyeing	46	10	207.70		HT200

CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	HI	UNIT	WEIGHTALL	total W.	dye M.
KTK001	0181	fabric	CVC	red	Re-Dyeing	65	9	169.80		HT200
KTK001	0189	fabric	CVC	blue	Re-Dyeing	60	9	162.00		HT200
KTK001	0185	fabric	TC+บางยัด	pink	Dyeing	62	15	314.40		HT400
MTX001	4293	rip	TC	violet	Dyeing	28	15	304.70		HT400
MTX001	4293	rip	TC	pink	Dyeing	28	15	304.70		HT400
MTX001	4293	rip	TC	yellow	Dyeing	28	20	406.20		HT400
MTX001	4294	fabric	TC+T	navy blue	Dyeing	39	10	211.90		HT400
MTX001	4294	fabric	TC+T	black	Dyeing	39	10	211.90		HT400
MTX001	4294	fabric	TC+T	cream	Dyeing	39	10	212.00		HT400
MTX001	4295	fabric	TR	yellow	Dyeing	36.5	10	214.00		HT400
MTX001	4295	fabric	TR	blue	Dyeing	36.5	10	214.10		HT400
HJX001	0124	fabric	POLY	navy blue	Dyeing	84	10	230.30		HT400
HJX001	0124	fabric	POLY	blue	Dyeing	84	10	230.30		HT400
HJX001	0124	fabric	POLY	black	Dyeing	84	10	230.30		HT400
SEK001	0219	fabric	CVC	green	Dyeing	35	15	285.60		HT400
SEX001	0461	fabric	TK	red	Dyeing	36	15	321.50	330.50	HT400
SEX001	0461	rip	TK	red	Dyeing	28	1	9.00		
SEX001	0467	fabric	TK	red	Dyeing	36	15	318.40	338.60	HT400
SEX001	0467	rip	TK	red	Dyeing	26	1	11.00		
SEX001	0467	collar	TK	red	Dyeing	26	1	9.20		
SEX001	0467	fabric	TK	cream	Dyeing	36	15	318.40		

CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	HI	UNIT	WEIGHTALL	total W.	dye M.
SEX001	0467	rip	TK	cream	Dyeing	26	1	11.00	339.60	HT400
SEX001	0467	collar	TK	cream	Dyeing	26	1	10.20		
SEX001	0470	fabric	TK	navy blue	Dyeing	38	10	216.40		HT400
SEX001	0470	fabric	TK	black	Dyeing	38	10	216.50		HT400
CPI001	0263	fabric	TK	green	Dyeing	37	10	213.50	233.90	HT400
CPI001	0263	rip	TK	green	Dyeing	30	1	20.40		
CPI001	0263	fabric	TK	beige	Dyeing	37	10	213.50	233.70	HT400
CPI001	0263	rip	TK	beige	Dyeing	30	1	20.20		
BIX001	24/02	fabric	TC+T	navy blue	Dyeing	36	15	304.30	327.70	HT400
BIX001	24/02	rip	TC+T	navy blue	Dyeing	30	1	23.40		
BIX001	24/02	fabric	TC+T	black	Dyeing	36	15	304.40	327.80	HT400
BIX001	24/02	rip	TC+T	black	Dyeing	30	1	23.40		
YHL001	2393	fabric	TC	pink	Dyeing	36	16	324.80		HT400
MTX001	0028	fabric	TK	navy blue	Dyeing	39	5	102.60	421.40	HT400
MTX001	0028	rip	TK	navy blue	Dyeing	28	1	5.50		
MTX001	0028	collar	TK	navy blue	Dyeing	28	1	12.00		
MTX001	4299	fabric	TK	navy blue	Dyeing	38	15	301.30		
MTX001	4299	fabric	TK	black	Dyeing	38	15	301.30		HT400
KTK001	0198	fabric	TC+ยางยืด	yellow	Dyeing	62	15	318.80		HT400
ITC001	3484A	fabric	CVC	navy blue	Dyeing	84	15	322.90		HT400
KTK001	0178	fabric	CVC	yellow	Re-Dyeing	84	15	298.80		HT400

CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	HI	UNIT	WEIGHTALL	total W.	dye M.
ITC001	930807	fabric	TK	gray	Re-Dyeing	65	15	315.70		HT400
KTK001	0187	fabric	TC	pink	Dyeing	76	20	451.00		HT600
PLK001	0330A	fabric	POLY	red	Dyeing	70	20	451.40	474.90	HT600
PLK001	0330A	rip	POLY	red	Dyeing	26	2	23.50		
SEX001	0462	fabric	TK	brown	Dyeing	36	20	428.70	440.70	HT600
SEX001	0462	rip	TK	brown	Dyeing	28	1	12.00		
SEX001	0461	fabric	TK	cream	Dyeing	36	20	428.60	440.60	HT600
SEX001	0461	rip	TK	cream	Dyeing	28	1	12.00		
SEX001	0461	fabric	TK	blue	Dyeing	36	20	428.60	440.60	HT600
SEX001	0461	rip	TK	blue	Dyeing	28	1	12.00		
SEX001	0461	fabric	TK	navy blue	Dyeing	36	25	535.70	550.70	HT600
SEX001	0461	rip	TK	navy blue	Dyeing	28	1	15.00		
CPI001	0260	fabric	TK	navy blue	Dyeing	37	23	460.00		HT600
CPI001	0267	fabric	TK	gray	Dyeing	37	23	467.80		HT600
YHL001	2392	fabric	TC	violet	Dyeing	92	25	512.90		HT600
MTX001	0013	fabric	CVC	bleach	Dyeing	68	27	572.70		HT600
KTK001	0195	fabric	COTTON	blue	Dyeing	49	25	495.20		HT600
KTK001	0196	fabric	CVC	navy blue	Dyeing	68	26	539.60		HT600
TAL001	0205	fabric	POLY	off-white	Dyeing	50	33	616.30		HT600
KTK001	0197	fabric	CVC	navy blue	Re-Dyeing	74	23	494.50		HT600
JSX001	0164	fabric	TC	off-white	Dyeing	64	24	522.10	1040.10	HT1000

CUSNO	ORDNO	TYPE	PRODUCT	COLOR	Work	HI	UNIT	WEIGHTALL	total W.	dye M.
JSX001	0165	fabric	TC	off-white	Dyeing	64	24	518.00		
PLK001	0334A	fabric	TK	yellow	Dyeing	70	30	681.10	725.30	HT1000
PLK001	0334A	rip	TK	yellow	Dyeing	26	3	44.20		
JKX001	4106	fabric	POLY	off-white	Dyeing	50	22	431.40	845.50	HT1000
JKX001	4105	fabric	POLY	off-white	Dyeing	50	18	414.10		
TAL001	0203	fabric	POLY	off-white	Dyeing	50	62	1158.00		HT1000
ASS001	0940	fabric	NYLON DS-075/	black	Dyeing	60	43	865.30		HT1000
PKF001	2213/283R	rip	COTTON	bleach	Re-Dyeing	67	23	462.00	921.90	HT1000
PKF001	2212/283R	rip	COTTON	bleach	Re-Dyeing	67	21	419.40		
PKF001	2212/283R	rip	COTTON	bleach	Re-Dyeing	67	2	40.50		
MTX001	4438	fabric	CVC	navy blue	Re-Dyeing	86	14	280.60	696.50	HT1000
MTX001	4436	fabric	CVC	navy blue	Re-Dyeing	86	16	316.10		
MTX001	4437	fabric	CVC	navy blue	Re-Dyeing	86	5	99.80		
YHL001	2361	fabric	CVC	blue	Dyeing	53	23	482.00	985.00	HT1000
YHL001	2382	fabric	CVC	blue	Dyeing	53	24	503.00		

**Step 12 and 13** : Allocate the orders to each Dyeing Machine(12)  
and Calculate release time in each order(13)

**High Temperature and Pressure Dyeing Machine 200Kg.**

M - HT200/1

CUSNO	ORDNO	PRODUCT	COLOR	WEIGHTALL	PD	TD	Date	Time
YHL002	4979	TC	cream	135.40	480	0	3/6/99	8:00
MTX001	4298A	TK	knaki	103.10	360	480		16:00
HJX001	0082	POLY	yellow	82.10	360	840		22:00
TBK001	00317	TK	yellow	192.60	360	1200	4/6/99	4:00
JSX001	0166	TR	mustard	208.20	480	1560		10:00
TBK001	00317	TK	tartar	192.60	360	2040		18:00
SEX001	0469	CVC	pink	80.00	480	2400	5/6/99	0:00
LLN001	P6248	POLY	pink	101.62	360	2880		8:00
LLN001	P6254	POLY	pink	207.70	360	3240		14:00
LLN001	P6253	POLY	green	106.16	360	3600		20:00
MTX001	4298A	TK	green	103.10	360	3960	6/6/99	2:00
HJX001	0082	POLY	green	147.80	360	4320		8:00
TBK001	00317	TK	green	192.60	360	4680		14:00
MTX001	0008	TR	blue	104.20	480	5040		20:00
JSX001	0167	TR	blue	208.10	540	5520	7/6/99	4:00
KTK001	0189	CVC	blue	162.00	480	6060		13:00
HJX001	0082	POLY	blue	147.80	360	6540		21:00
MTX001	4298A	TK	gray	103.10	360	6900	8/6/99	3:00
MTX001	4298A	TK	brown	103.10	360	7260		9:00
TBK001	00317	TK	brown	192.60	360	7620		15:00

## M - HT200/2

CUSNO	ORDNO	PRODUCT	COLOR	WEIGHTALL	PD	TD	Date	Time
YHL002	4970A	TC	red	163.40	660	0	3/6/99	8:00
KTK001	0181	CVC	red	169.80	660	660		19:00
HJX001	434	POLY	red	14.10	360	1320	4/6/99	6:00
TBK001	00317	TK	red	192.60	360	1680		12:00
ITC001	3478	CVC	red	64.70	660	2040		18:00
KTK001	0193	TC	navy blue	152.00	660	2700	5/6/99	5:00
YHL002	4970A	TC	navy blue	151.20	660	3360		16:00
TBK001	00317	TK	navy blue	192.60	360	4020	6/6/99	3:00
HJX001	0082	POLY	navy blue	98.50	360	4380		9:00
KTK001	0188	CVC	navy blue	180.50	660	4740		15:00
ITC001	3479	CVC	navy blue	107.70	660	5400		2:00
TBK001	00360	TC+T	black	123.00	360	6060		13:00
HJX001	0082	POLY	black	197.20	360	6420		19:00



## High Temperature and Pressure Dyeing Machine 400 Kg.

M - HT400/1

CUSNO	ORDNO	PRODUCT	COLOR	WEIGHTALL	PD	TD	Date	Time
SEX001	0467	TK	cream	318.40	360	0	3/6/99	8:00
MTX001	4294	TC+T	cream	212.00	360	428.2		15:08
KTK001	0178	CVC	yellow	298.80	480	788.2		21:08
MTX001	4293	TC	yellow	406.20	480	1268.2	4/6/99	5:08
MTX001	4293	TC	pink	304.70	480	1748.2		13:08

M - HT400/2

CUSNO	ORDNO	PRODUCT	COLOR	WEIGHTALL	PD	TD	Date	Time
KTK001	0198	TC+ขางยัด	yellow	318.80	480	0	3/6/99	8:00
MTX001	4295	TR	yellow	214.00	480	480		16:00
CPI001	0263	TK	beige	213.50	480	960	4/6/99	0:00
ITC001	930807	TK	gray	315.70	360	1440		8:00
CPI001	0263	TK	green	213.50	360	1800		14:00

M - HT400/3

CUSNO	ORDNO	PRODUCT	COLOR	WEIGHTALL	PD	TD	Date	Time
YHL001	2393	TC	pink	324.80	480	0	3/6/99	8:00
KTK001	0185	TC+ขางยัด	pink	314.40	540	480		16:00
MTX001	4295	TR	blue	214.10	480	1020	4/6/99	1:00
SEK001	0219	CVC	green	285.60	540	1500		9:00

## M - HT400/4

CUSNO	ORDNO	PRODUCT	COLOR	WEIGHTALL	PD	TD	Date	Time
SEX001	0467	TK	red	318.40	360	0	3/6/99	8:00
HJX001	0124	POLY	blue	230.30	360	438.3		15:18
MTX001	4293	TC	violet	304.70	660	798.3		21:18
MTX001	4294	TC+T	navy blue	211.90	360	1458.3	4/6/99	8:18
ITC001	3484A	CVC	navy blue	322.90	660	2058.9		18:19
HJX001	0124	POLY	navy blue	230.30	360	2718.9	5/6/99	5:19
HJX001	0124	POLY	black	230.30	360	3078.9		11:19

## M - HT400/5

CUSNO	ORDNO	PRODUCT	COLOR	WEIGHTALL	PD	TD	Date	Time
SEX001	0461	TK	red	321.50	360	0	3/6/99	8:00
SEX001	0470	TK	navy blue	216.40	360	360		14:00
BIX001	24/02	TC+T	navy blue	304.30	360	720		20:00
MTX001	0028	TK	navy blue	102.60	360	1080	4/6/99	2:00
BIX001	24/02	TC+T	black	304.40	360	1440		8:00
MTX001	4299	TK	black	301.30	360	1800		14:00
SEX001	0470	TK	black	216.50	360	2160		20:00
MTX001	4294	TC+T	black	211.90	360	2520	5/6/99	2:00

## High Temperature and Pressure Dyeing Machine 600Kg.

M - HT600/1

CUSNO	ORDNO	PRODUCT	COLOR	WEIGHTALL	PD	TD	Date	Time
MTX001	0013	CVC	bleach	572.70	240	0	3/6/99	8:00
TAL001	0205	POLY	off-white	616.30	240	240		12:00
SEX001	0461	TK	cream	428.60	360	480		16:00
KTK001	0187	TC	pink	451.00	480	840		22:00
KTK001	0195	COTTON	blue	495.20	300	1320	4/6/99	6:00
SEX001	0461	TK	blue	428.60	360	1620		12:00
YHL001	2392	TC	violet	512.90	480	1980	5/6/99	18:00
CPI001	0267	TK	gray	467.80	360	2460		2:00

M - HT600/2

CUSNO	ORDNO	PRODUCT	COLOR	WEIGHTALL	PD	TD	Date	Time
PLK001	0330A	POLY	red	451.40	480	0	3/6/99	8:00
SEX001	0462	TK	brown	428.70	360	455.21		15:35
SEX001	0461	TK	navy blue	535.70	360	815.21		21:35
CPI001	0260	TK	navy blue	460.00	360	1175.21	4/6/99	3:35
KTK001	0197	CVC	navy blue	494.50	660	1535.21		8:35
KTK001	0196	CVC	navy blue	539.60	660	2195.21		20:35

## High Temperature and Pressure Dyeing Machine 1000Kg.

M - HT1000/1

CUSNO	ORDNO	PRODUCT	COLOR	WEIGHTALL	PD	TD	Date	Time
TAL001	0203	POLY	off-white	1158.00	240	0	3/6/99	8:00
PKF001	2213/283RE	COTTON	bleach	462.00	240	240		12:00
JKX001	4106	POLY	off-white	431.40	240	852.7		22:13
YHL001	2361	CVC	blue	482.00	540	1493	4/6/99	8:53
PLK001	0334A	TK	yellow	681.10	660	2309.7		22:30

M - HT1000/2

CUSNO	ORDNO	PRODUCT	COLOR	WEIGHTALL	PD	TD	Date	Time
MTX001	4438	CVC	navy blue	280.60	660	489.7	3/6/99	16:10
ASS001	0940	NYLON DS-075/1	black	865.30	300	1667.2	4/6/99	11:47

M - HT1000/3

CUSNO	ORDNO	PRODUCT	COLOR	WEIGHTALL	PD	TD	Date	Time
JSX001	0164	TC	off-white	522.10	240	0	3/6/99	8:00

## Rapid Winch Dyeing Machine 200 Kg.

M - RW200/1

CUSNO	ORDNO	PRODUCT	COLOR	WEIGHTALL	PD	TD	Date	Time
MTX001	4297A	TK	bleach	101.80	240	0	3/6/99	8:00
LLN001	P6238	TC	off-white	143.80	240	240		12:00
PKF001	2214/297	COTTON	bleach	156.14	240	493		16:13
YHL001	2180	COTTON	bleach	126.70	240	1243.7	4/6/99	4:44
TBK001	00354	TK	bleach	123.10	240	1483.7		8:44
KTK001	0182	COTTON	bleach	108.20	240	2502.4	5/6/99	1:42
ITC001	3469A	COTTON	cream	171.20	300	2742.4		5:42
SEX001	0466	COTTON	knaki	166.60	300	3042.4		10:41
SEX001	0466	COTTON	knaki	8.00	300	3342.4		15:42
SEX001	0466	COTTON	yellow	166.50	300	3642.4		20:42
SEX001	0466	COTTON	yellow	8.00	300	3942.4	6/6/99	1:42

M - RW200/2

CUSNO	ORDNO	PRODUCT	COLOR	WEIGHTALL	PD	TD	Date	Time
LLN001	P6249	POLY	green	102.10	360	0	3/6/99	8:00
KTK001	0184	COTTON	navy blue	87.40	420	360		14:00
ASS001	0940	YLON DS-075	navy blue	100.60	300	2108.5	4/6/99	19:14

## Rapid Winch Dyeing Machine 400 Kg.

M - RW400/1

CUSNO	ORDNO	PRODUCT	COLOR	WEIGHTALL	PD	TD	Date	Time
ASS001	0940	NYLON DS-075/1	brown	201.20	300	1195	4/6/99	3:55
ASS001	0940	NYLON DS-075/1	black	201.20	300	1495		8:55
ASS001	4963	NYLON DS-175	black	323.30	300	1795		13:55

M - RW400/2

CUSNO	ORDNO	PRODUCT	COLOR	WEIGHTALL	PD	TD	Date	Time
SEX001	0468	TK	bleach	409.80	240	0	3/6/99	8:00
MTX001	0029	TK	off-white	206.10	240	390		14:30
MTX001	4296	POLY	bleach	474.80	240	700.2		19:40
MTX001	0011	TK	bleach	301.10	240	840.2		23:40
ITC001	930800	COTTON	yellow	232.90	300	1180.2	4/6/99	3:40
ITC001	3483	COTTON	green	394.20	300	2073.1		18:33

M - RW400/3

CUSNO	ORDNO	PRODUCT	COLOR	WEIGHTALL	PD	TD	Date	Time
YHL001	2181	TC	bleach	223.30	240	0	3/6/99	8:00
KTK001	0194	TC	bleach	371.40	240	338.3		13:38

## Winch Dyeing Machine 40Kg.

M - W40/1

CUSNO	ORDNO	PRODUCT	COLOR	WEIGHTALL	PD	TD	Date	Time
KTK001	0039	TC	bleach	12.30	240	265.3	3/6/99	12:25
ITC001	3478	CVC	bleach	43.10	240	2602.9	5/6/99	3:23
KTK001	0183	COTTON	blue	41.70	200	2842.9		7:23
KTK001	0183	COTTON	yellow	21.90	200	3042.9		10:43
KTK001	0190	COTTON	knaki	10.00	200	3242.9		14:03
KTK001	0180	COTTON	knaki	17.90	200	3442.9		17:23

## Winch Dyeing Machine 100 Kg.

M - W100/1

CUSNO	ORDNO	PRODUCT	COLOR	WEIGHTALL	PD	TD	Date	Time
KTK001	0192	COTTON	bleach	73.70	40	132.3	3/6/99	10:12
YHL001	2369	TC	off-white	65.60	40	1639.3	4/6/99	11:19
SEX001	0436RT2	COTTON	gray	36.70	360	2939.3	5/6/99	9:00

## Winch Dyeing Machine 200 Kg.

M - W200/1

CUSNO	ORDNO	PRODUCT	COLOR	WEIGHTALL	PD	TD	Date	Time
MTX001	4291	TOP	scour	200.30	40	494.9	3/6/99	16:15

## Winch Dyeing Machine 400 Kg.

M - W400/1

CUSNO	ORDNO	PRODUCT	COLOR	WEIGHTALL	PD	TD	Date	Time
ITC001	3480A	COTTON	scour	384.90	40	0	3/6/99	8:00
MTX001	0014	TC	scour	441.50	80	71		9:11
MTX001	0030	POLY+TOP	scour	410.50	120	151		10:31

M - W400/2

CUSNO	ORDNO	PRODUCT	COLOR	WEIGHTALL	PD	TD	Date	Time
MTX001	0012	TOP	scour	411.50	40	0	3/6/99	8:00



## Step 15 : Calculate release time in Cut Fabric and Gas Finishing machine

### Cut Fabric Finishing Machine

#### M - CUT FABRIC FINISHING /1

CUSNO	ORDNO	PRODUCT	COLOR	UNIT	WEIGHTALL	TF	late	Date	Time
ITC001	3480A	COTTON	scour	18	384.90	4844.5	329.8	6/6/99	16:45
KTK001	0192	COTTON	bleach	4	73.70	5039.9			20:00
PKF001	2213/283RE	COTTON	bleach	23	462.00	5116.1	393.2		21:16
PKF001	2212/283RE	COTTON	bleach	21	419.40	5310.5	393.2	7/6/99	0:31
MTX001	0013	CVC	bleach	27	572.70	5482.4			3:22
PKF001	2214/297	COTTON	bleach	7	156.14	5691.2			6:51
ITC001	930801	CVC	cream	20	417.40	5790.8			8:31
ITC001	930803	CVC	maroon	3	60.30	5929.8			10:50
KTK001	0181	CVC	red	9	169.80	5988.9	296.1		11:49
MTX001	4438	CVC	navy blue	14	280.60	6076.2			13:16
MTX001	4436	CVC	navy blue	16	316.10	6157			14:37
MTX001	4437	CVC	navy blue	5	99.80	6247.2			16:07
KTK001	0178	CVC	yellow	15	298.80	6316.2			17:16
KTK001	0179	CVC	bleach	16	305.20	6401.7			18:42
ITC001	930800	COTTON	yellow	12	232.90	6521.9			20:42
KTK001	0189	CVC	blue	9	162.00	6660.5	4844.5		23:00
YHL001	2180	COTTON	bleach	7	126.70	6747.8		8/6/99	0:46
KTK001	0197	CVC	navy blue	23	494.50	6847.4	278.6		2:07
YHL001	2361	CVC	blue	23	482.00	7000.5			4:40
YHL001	2382	CVC	blue	24	503.00	7123.8			6:43
KTK001	0195	COTTON	blue	25	495.20	7281.4			9:21
ITC001	3483	COTTON	green	18	394.20	7521.4			13:22
YHL001	2368	CVC	knaki	2	36.80	7708.8			16:27
KTK001	0196	CVC	navy blue	26	539.60	7761.2			17:21
KTK001	0188	CVC	navy blue	9	180.50	7928.4	2436.6		20:08

CUSNO	ORDNO	PRODUCT	COLOR	UNIT	WEIGHTALL	TF	late	Date	Time
ITC001	3469A	COTTON	cream	8	171.20	8015.7			21:36
ITC001	3479	CVC	orange	1	21.60	8093.1			22:53
ITC001	3478	CVC	red	3	64.70	8112.8			23:13
ITC001	3479	CVC	navy blue	5	107.70	8141.9	2833.1		23:42
ITC001	3484A	CVC	navy blue	15	322.90	8180.4		9/6/99	0:20
ITC001	3478	CVC	bleach	2	43.10	8265.9			1:46
KTK001	0182	COTTON	bleach	5	108.20	8320.3			2:40
KTK001	0183	COTTON	blue	2	41.70	8374.3			3:34
KTK001	0183	COTTON	yellow	1	21.90	8404.9			4:05
KTK001	0190	COTTON	knaki	1	10.00	8457.7			4:55
KTK001	0180	COTTON	knaki	1	17.90	8510.5			5:50

## M - CUT FABRIC FINISHING /2

CUSNO	ORDNO	PRODUCT	COLOR	UNIT	WEIGHTALL	TF	late	Date	Time
JSX001	0164	TC	off-white	24	522.10	5362.5	326.5	6/6/99	1:22
JSX001	0165	TC	off-white	24	518.00	5478.3	210.7		3:18
TMT001	1153	TC	pink	11	214.10	5624.1			5:44
YHL001	2181	TC	bleach	12	223.30	5715.3			7:15
LLN001	P6238	TC	off-white	7	143.80	5810.7	104.9		8:51
KTK001	0039	TC	bleach	1	12.30	5885.1			10:05
KTK001	0191	COTTON	navy blue	2	40.00	5934.1			10:54
KTK001	0184	COTTON	navy blue	4	87.40	5994.3	428.4		11:54
KTK001	0193	TC	navy blue	7	152.00	6070.5	2725.1		13:10
KTK001	0194	TC	bleach	17	371.40	6114.9			13:54
KTK001	0187	TC	pink	20	451.00	6231.3	465.8		15:51
TBK001	00360	TC+T	black	6	123.00	6360.3	5486		18:00
KTK001	0198	TC+ยางยืด	yellow	15	318.80	6430.5			19:11
KTK001	0185	TC+ยางยืด	pink	15	314.40	6508.5			20:29
YHL001	2392	TC	violet	25	512.90	6616.5	1240.6		22:17
SPG001	290	NYLON	black	1	17.50	6781.5		7/6/99	1:02
TBK001	00359	TK	yellow	10	212.70	6831.2			1:51
TBK001	00359	TK	cream	5	104.30	6894.2			2:54
ESO001	DS20	POLY	bleach	1	11.00	6963.2			4:03
MTX001	4296	POLY	bleach	23	474.80	7013			4:53
TBK001	00354	TK	bleach	6	123.10	7168			7:28
ITC001	930807	TK	gray	15	315.70	7242.2	120.8		8:42
ASS001	0940	NYLON DS-075/1	brown	10	201.20	7359.2			10:39
ASS001	0940	NYLON DS-075/1	black	43	865.30	7421.2			11:41
ASS001	4963	NYLON DS-175	black	16	323.30	7638.3			15:18
ASS001	0940	NYLON DS-075/1	black	10	201.20	7728.5			16:48
ASS001	0940	NYLON DS-075/1	navy blue	5	100.60	7790.5			17:51
TBK001	00317	TK	yellow	10	192.60	7859			19:00
TBK001	00317	TK	green	10	192.60	7922	2611.5		20:02

CUSNO	ORDNO	PRODUCT	COLOR	UNIT	WEIGHTALL	TF	late	Date	Time
TBK001	00317	TK	tartar	10	192.60	7985			21:05
TBK001	00317	TK	red	10	192.60	8048			22:08
TBK001	00317	TK	brown	10	192.60	8111	5362.5		23:11
TBK001	00317	TK	navy blue	10	192.60	8174	1699.5	8/6/99	0:14
HJX001	0082	POLY	navy blue	6	98.50	8267	1856.7		1:47
HJX001	0082	POLY	black	12	197.20	8310.8	3866.1		2:31
PLK001	0334A	TK	yellow	30	681.10	8413.4			4:13
PLK001	0330A	POLY	red	20	451.40	8572.4			6:52
HJX001	0124	POLY	navy blue	10	230.30	8713.4			9:13
HJX001	0124	POLY	blue	10	230.30	8776.4			10:16
HJX001	0124	POLY	black	10	230.30	8839.4			11:19

## Gas Finishing Machine

## M - GAS FINISHING /1

CUSNO	ORDNO	PRODUCT	COLOR	UNIT	WEIGHTALL	TF	late	Date	Time
MTX001	4439	CVC	gray	1	9.00	4337.8		6/6/99	8:18
MTX001	4439	CVC	orange	1	19.30	4358.1			8:38
MTX001	4439	CVC	yellow	2	31.80	4378.4			8:58
TAL001	0203	POLY	off-white	62	1158.00	4429	288.8		9:49
TAL001	0205	POLY	off-white	33	616.30	5128.4			21:28
JKX001	4106	POLY	off-white	22	431.40	5518		7/6/99	3:58
JKX001	4105	POLY	off-white	18	414.10	5769.4			8:09
JSX001	0166	TR	mustard	10	208.20	5991	465.8		11:51
JSX001	0167	TR	blue	10	208.10	6139	4337.8		14:18
LLN001	P6249	POLY	green	5	102.10	6302	2132.8		17:00
LLN001	P6253	POLY	green	5	106.16	6302	2051.3		17:00
LLN001	P6254	POLY	pink	10	207.70	6419	1621.8		19:00
LLN001	P6248	POLY	pink	5	101.62	6419	1214.3		19:00

## M - GAS FINISHING /2

CUSNO	ORDNO	PRODUCT	COLOR	UNIT	WEIGHTALL	TF	late	Date	Time
MTX001	4435	TC+TOP	gray	20	408.60	3312		5/6/99	15:12
MTX001	0014	TC	scour	20	441.50	3818			20:18
JSX001	01	TC	pink	1	20.60	3924		6/6/99	1:24
YHL002	4970A	TC	red	8	163.40	3985.3	78.5		2:25
YHL002	4970A	TC	navy blue	7	151.20	4077.7	3312		3:58
BIX001	24/02	TC+T	black	15	304.40	4197.8	914.2		5:58
BIX001	24/02	TC+T	navy blue	15	304.30	4417.3	97.2		9:37
YHL001	2393	TC	pink	16	324.80	4651.8			13:31
YHL002	4979	TC	cream	6	135.40	4900.6			17:41
YHL001	2369	TC	off-white	3	65.60	5006.4			19:26
MTX001	4294	TC+T	cream	10	212.00	5069.3			20:29
MTX001	4294	TC+T	navy blue	10	211.90	5217.3			22:57
MTX001	4294	TC+T	black	10	211.90	5365.3	913.7	7/6/99	1:25

## M - GAS FINISHING /3

CUSNO	ORDNO	PRODUCT	COLOR	UNIT	WEIGHTALL	TF	late	Date	Time
MTX001	4297A	TK	bleach	5	101.80	5532.7	285.5	7/6/99	4:13
SEX001	0468	TK	bleach	20	409.80	5591.7	355		5:12
SEX001	0467	TK	cream	15	318.40	5752.7	268.5		7:53
SEX001	0467	TK	red	15	318.40	5874.7			9:55
SEX001	0461	TK	red	15	321.50	6011.7	9.5		12:12
SEX001	0462	TK	brown	20	428.70	6133.7	291.5		14:14
SEX001	0461	TK	navy blue	25	535.70	6294.7	490.5		16:55
SEX001	0461	TK	blue	20	428.60	6494.7	1064.5		20:15
SEX001	0461	TK	cream	20	428.60	6655.7			22:56
CPI001	0267	TK	gray	23	467.80	6831.7	1567.5	8/6/99	1:52
CPI001	0260	TK	navy blue	23	460.00	7016.1	129.5		4:56
CPI001	0263	TK	green	10	213.50	7215.5	568		8:15
CPI001	0263	TK	beige	10	213.50	7298.5			9:38
MTX001	0011	TK	bleach	15	301.10	7396.5			11:17
MTX001	4298A	TK	knaki	5	103.10	7533.5			13:33
MTX001	4298A	TK	green	5	103.10	7577.5	2320.5		14:17
MTX001	4298A	TK	gray	5	103.10	7621.5	5216.5		15:00
MTX001	4298A	TK	brown	5	103.10	7665.5	5532.5		15:46
MTX001	0028	TK	navy blue	5	102.60	7709.5			16:29

## M - GAS FINISHING /4

CUSNO	ORDNO	PRODUCT	COLOR	UNITS	EIGHTA	TF	late	Date	Time
MTX001	0012	TOP	scour	20	411.50	4923.3	70.2	6/6/99	18:12
MTX001	0030	POLY+TOP	scour	20	410.50	5229.3			23:09
MTX001	4291	TOP	scour	10	200.30	5473.3		7/6/99	3:13
MTX001	0029	TK	off-white	10	206.10	5636.3			5:56
MTX001	4299	TK	navy blue	15	301.30	5734.3			7:34
MTX001	4299	TK	black	15	301.30	5856.3	1355.2		9:36
SEX001	0470	TK	navy blue	10	216.40	5993.3			11:53
SEX001	0470	TK	black	10	216.50	6076.3	1458		13:16
MTX001	4295	TR	blue	10	214.10	6174.3	336		14:54
MTX001	0008	TR	blue	5	104.20	6322.3	4164.5		17:22
MTX001	4295	TR	yellow	10	214.00	6398.8			18:39
SEK001	0219	CVC	green	15	285.60	6561.8	571.2		21:22
SEX001	0469	CVC	pink	4	80.00	6811.3	1041.2		1:31
HJX001	0082	POLY	yellow	5	82.10	6932.5			3:33
HJX001	0082	POLY	blue	9	147.80	6993.5	4923.5		4:33
HJX001	0082	POLY	green	9	147.80	7099.3	2597.5		6:19
HJX001	0082	POLY	red	9	147.80	7204.9			8:05





## Biography

Preecha Laoboonlur was born in 1975 in Bangkok, Thailand. He completed his undergraduate studies at Chulalongkorn University in Industrial Engineering. Then, he studied Master of Engineer in Engineering Management and Master of Science in Engineering Business Management at The Regional Center for Manufacturing Systems Engineering, Chulalongkorn University.