WS ORK – TUDY

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Stichting Work-Study, de Work-Factor Raad en de WFGD willen een platform bieden aan Work-Factor gebruikers, arbeidsanalisten, cost engineers en industrial engineers om problemen, oplossingen, ideeën en tips te bespreken. Daartoe zullen we regelmatig een WS Tip sturen aan "WF-leden" en geïnteresseerden.
Mocht dit bericht niet op het juiste adres aankomen stuur het dan door naar geïnteresseerden en laat ons dat weten.

WS ORK – TUDY WS Tip 154 31 October 2018

ASSEMBLY SYNTHETICS / WORK STUDY DEP. / ORIGIN P.I.T. EINDHOVEN d.d. 14.8.67 - AdW

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Section 1

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1.1 These synthetics originated in the TEO-PERM and are Normal Times of work elements used in the assembly of professional equipment under optimal conditions.
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Hieronder vinden jullie enkele voorbeelden van Normaal Tijden van Section 2, 3 en 10.
Zoals jullie zien heb ik niet het origineel, maar een niet al te slechte kopie.
Ik heb enkele waarden nagerekend (met DWF geanalyseerd) en inderdaad het zijn normtijden T60 Bdx.

Voor reacties naar

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Var AdW | WORK STUDY SYNTHETICS | Section: 2

Date 14.8.67 | TRANSPORT, GRASPING AND PREPOSITION MOTIONS | Page 1 of

	WEIGHT DIMENSION	REACH DISTANCE	TIME IN SECS. SINGLE	SIMO
2.0 ISOLATED COMPONENTS (NO P.P.)	Up to 2 lbs.	10"	1.3	
		16"	1.5	
		26"	1.8	
R, Gr, and M to Asy.	From 2 lbs. to 7 lbs.	10"	1.5	
		16"	1.8	
		26"	2.1	
2.1 ISOLATED COMPONENTS FROM TABLE. (P.P. REQUIRED)	Up to .37"	10"	1.7	1.9
		16"	2.0	2.2
		26"	2.2	2.4
	From .37" up to 3" Weight 2 lbs.	10"	1.5	1.6
		16"	1.7	1.9
		26"	2.0	2.1
	From 3" up to 8" From 2 up to 7 lbs.	10"	1.9	
		16"	2.2	
		26"	2.5	
R, Gr, P.P. & M. to Asy.	From 3" up to 8" From 7 up to 13 lbs.	10"	2.1	
		16"	2.4	
		26"	2.8	
2.2 RANDOM PILES (NO P.P.)	From .185" up to .37"	10"	1.6	1.8
		16"	1.8	2.0
		26"	1.9	2.2
R, Gr & M to Asy.	From .37" up to 4"	10"	1.5	1.6
		16"	1.7	1.8
		26"	1.9	2.0
Allowance for flat components	up to .046" thick		0.1	
2.3 RANDOM PILES (P.P. REQUIRED)	From .185" up to .37"	10"	2.1	2.3
		16"	2.3	2.5
		26"	2.4	2.7
R, Gr, P.P. & M. to Asy.	From .37" up to 4"	10"	1.8	2.2
		16"	2.0	2.4
		26"	2.2	2.6
Allowance for flat components	up to .046" thick		0.1	

AdW — Section: 3

14.8.67

1

WORK STUDY SYNTHETICS

MECHANICAL ASSEMBLY

3.0 ASSY. SCREWS & TOOLS
(Excl. Taking and Transport)

	Secs.
Assemble screw to hole	1.0
Assemble screw to hole through 2 plates one on top of the other, therefore adjust plates a bit	1.6
Start screw or nut on 1st thread	1.6
Assemble woodscrew in pre-drilled hole	1.6
Assemble screwdriver to screw	1.3
Assemble screwdriver with sleeved bit to screw	1.9
Assemble Box spanner to nut or screw	1.1
Assemble open ended spanner to nut or bolt (Hex Head) < 5 mm.	1.3
" " " " " " " " " " M5-M8	1.0
" " " " " " " " " " M10-$\frac{1}{2}$"-$\frac{5}{8}$"	0.8
" Ratchet spanner to nut or bolt (Hex.Head) M5-M8	1.1
" " " " " " " " " " M10-$\frac{1}{2}$"-$\frac{5}{8}$"	0.8
Lock screw or nut when using a spring washer (Grover)	0.7
" " " " " " lock washer	0.3

2.1 NOTES ON SCREWDRIVER & SCREWING

1. The screwdriver is handled with both hands viz one hand on grip, the other hand keeps screwdriver in right position

2. In case of employment of a pneumatic screwdriver an allowance of .5 seconds per screw must be given for starting the screwdriver.

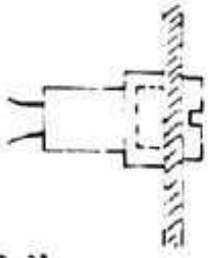
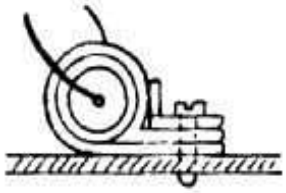
Screwing screw or nut by hand (without tools) (round head easy to turn)	sec/mm.	0.34
Screwing screw or nut by hand (hexagonal head)	"	0.52
Screw or unscrew nut (very easy to turn along fingers)	"	0.44
Screwing down screw under drilling machine M 3-4 and 5		1.3 sec

In case of damaged threading, tightening under a drilling machine is impossible. Assumed probability 1 screw in 20. These screws must be tightened with a handscrewdriver. Additional time for handscrewing 11.2 sec. - .56 seconds per screw.

USE A.d.W. | WORK STUDY SYNTHETICS | Section 10

DATE 14/8/67

1 | COMPONENT ASSEMBLY

			sec.
10.29		**Glueing small company mark in holder**	11.5
		Take glue, glue holder, take mark and position in holder, aside glue	11.5
10.30		**Assy contactsocket**	2.3 +nx10.1
		Take socket and philite nut with recessed head R = 65 cm.	2.-
		Nut through plate	1.-
		Nut in 1st thread	1.6
		Screwdriver for recessed head on nut	1.3
		Tighten screw (4 x 0.98)	3.9
		Movement	0.3
			10.1
		Take and aside tools	2.3
10.31		**Nut out of contact socket**	2.7
		Take carton, unpack 6 contact sockets	0.7
		Unscrew nut out of socket under drilling machine (left turning) with right and left hand alternately including taking and aside	2.-
			2.7
10.32		**Assy condensor**	35.2
		Take screw and bracket	2.8
		Screw through bracket	1.-
		Take plastic strip and place on screw (2 + 1.6)	3.6
		Bend plastic strip and position on screw (2.2 + 1)	3.2
		Screw in 1st thread	1.6
		Take screwdriver and place on screw (1.5 + 1.3)	2.8
		Screw 2 mm. (2 x 1.56)	3.1
		Take condensor and position in loop of strip and pull (2.2 + 3 + 2.1)	7.3
		Screwdriver on screw	1.3
		Tighten screw 2 mm. (2 x 1.56)	3.1
		Aside screwdriver	0.8
		Take knife or scissors, cut strip and aside	4.6
			35.2
		Add. for lock sealing lacquer	3.-
		Add. for lock washer (1.7 + 1 + 0.3)	3.-