

## ERRATA

Page	Paragraph	Line	
vi		7	"conference" for "confrence"
xvii	6	3	"Trondheim" for "Troudheim"
1	1	1	"a certain" for "certain"
1	3	4	"interest to researchers" for "interest researchers"
1	4	3	"called" for "called as"
1	4	4	"the 1980s" for "1980s"
2	2	6	"cross-sections" for "cross-section"
2	3	3	"remains at" for "still stays in"
4	1	2	"a certain" for "certain"
4	4	5	"there is still controversy" for "there are still controversies"
5	1	1	"the tensile" for "tensile"
5	1	3	"the advancement" for "the advance"
5	4	3	"a certain" for "certain"
7	3	3	"believes" for "believe"
8	2	2	"de Ruvo 1986" for "Ruvo 1986"
8	2	3	"the sheet" for "sheet"
8	3	4	"with the beating" for "with beating"
9	2	3	"wall affects swelling" for "wall affect swelling"
10	3	6	"a small" for "small"
11	3	5	"determine" for "determines"
12	2	6	"applies only to perfectly random sheets" for "apples only to perfect random of sheets"
13	3	3	"bears" for "bear"
14	1	2	"lead to" for "lead"
15	1	10	"the network and," for "the network"
17	1	1	"Räisänen" for "Raisanen"
17	3	3	Insert " $l_f$ is fibre length" between " $x \in (0, l_f)$ ," and "and"
19	2	12	"Räisänen" for "Raisanen"
19	3	13	"depending" for "depend"
23	1	6	Delete "the" before Page's
24	4	1	"Kärenlampi 1995a; Kärenlampi 1995b" for "Kärenlampi 1995; Kärenlampi 1995"
25	2	3	" $n_p / n_f = f(\phi / \beta)$ " for " $n_f / n_p = f(\phi / \beta)$ "
29	2	3	"de Ruvo 1986" for "Ruvo 1986"
29	2	9	"provided" for "provide"
29	2	11	"exists" for "exist"
34	2	6	"a routine" for "routine"
36	3	6	"the following" for "following"
38	3	8	"determined" for "determine d"
39	4	1	"attempted" for "attempt"
43	2	2	"In other words," for "In other word,"
45	1	2	"stress is transferred" for "stress transferred"
45	2	6	Delete "paper by using the second ad hoc premise."
46	3	1	Add "(greater than 200kg/m <sup>3</sup> )" after "reasonably high density"
48	1	1	"a ratio, $r$ ," for "a ratio"
48	3	2	"dry zero span strength" for "zero span strength"
48	3	8	"wider distribution" for "larger distribution"
50	2	1	"the number of" for "the number"
51	2	4	Delete "its"

51	2	3	"A <sub>bf</sub> " for "A <sub>b</sub> "
53			Replace "a" with "b" in Equation 3.9
56	3	8	"a technique" for "technique"
56	3	10	"RBA that have been" for "RBA that been"
56	3	11	"model for the number of" for "model for number of"
56	4	5	"equation is derived" for "equation are derived"
57	2	2	"fibre-fibre contacts per unit" for "fibre-fibre contact per unit"
59	2	5	"(Li and Parker 1999)" for "(Li 1999)"
63	3	7	Delete "into block"
73	1	3	"by the routine confocal" for "by the route confocal"
82	3	2	"Table 5-1" for "Figure 5-1"
84	2	1	Delete "is" between "AD" and "can"
84	2	2	"and using" for "according to its definition by"
84	5	1	"100g OD" for "100g"
85	2	4	"in (Li and Johnston at al. 1999)" for "in (Li 1999)"
92	4	3	"A <sub>bm</sub> " for "A <sub>s</sub> "
92	4	4	"Subsection 4.4.1.5" for "Subsection 4.4.5"
93	Equation 6.2		" $f_m = \frac{\pi^2(t/P)(1-\pi/P)}{1-(\delta_D/r)^2}$ " for " $f_m = \frac{\pi^2(t/P)(1-t/P)}{1-(\delta_D/r)^2}$ "
96	Figure 6-4		Insert paragraph break between the caption and "Table 6-1"
98	2	3	"shifts" for "skews"
100	2	3	"layers" for "layer"
100	1	13	Add "(vertical distance between two neighbouring contacts)" after "distance"
101	2	1	"fibre cross-sections" for "fibre cross-section"
103	2	15	"for the number" for "for number"
104	2	7	"and total number" for "and number"
104	2	14	"the number ... is affected by" for "number... is affect by"
104	2	10	"total numbers" for "properties"
104	2	18	"on the number of" for "on number of"
104	Table 7-1		"N <sub>cm</sub> " for "N <sub>c</sub> "
109	1	1	"rejects responded to wet" for "reject to wet"
109	1	3	"shifted" for "skewed"
111	Figure 7-5		"Frequency of the free fibre length" for "Probability" on both x and y axes.
111	1	1	"frequency of the free fibre length" for "probability"
111	1	2	"frequency" for "probability"
113	1	8	"from the literature" for "from literature"
114	1	1	"measured number of fibre-fibre contacts, N <sub>cm</sub> , and" for "measure number of fibre-fibre contacts and"
114	2	1	"the new model, N <sub>cp</sub> , are" for "the new model are"
114	2	18	"on the number" for "on number"
122	2	2	Add "b is fibre bond strength per unit bonded area," after "A is the average fibre cross sectional area (m <sup>2</sup> ),"
123	2	1	"shear bond strength per unit bonded area" for "bond strengths"
125	1	4	"fibre morphology have on" for "fibre morphology on"
125	3	3	"the Page equation" for "Page equation"
138	5	2	"the following equation" for "the follow equation"
153	2	7	"at a very" for "at very"
153	3	2	"contact" for "contacts"

160	1	“Kärenlampi, P. (1995a)” for “Kärenlampi, P. (1995)”
160	4	“Kärenlampi, P. (1995b)” for “Kärenlampi, P. (1995)”

#### ADDENDUM

p 9 Figure 2-2: Add at the end of the caption: “(The arrows indicate the stress direction)”

p 15 Figure 2-5: Change the caption to “Load distribution in a fibre predicted by Cox’s shear lag model, where  $L$  is the fibre length and  $l$  is the distance over which the stress is transferred into the fibre.”

p 16 Figure 2-6: Add at the end of the caption “, where  $l$  is the position along the fibre and  $l_f$  is the total fibre length”

p 18 para 4 line 2: replace “Working with very thin sheets that were treated as two-dimensional sheets,” for “Working with very thin, two-dimensional sheets,”

p 20 para 3 line 5: Replace “This type of model is called a strength...” for “We call this type of model strength...”

p 20 para 3 line 7: Replace “This type of model is called a pull-out...” for “We call this type of model pull-out...”

p 25 para 2: Replace “the mean axial force required to pull a fibre from the sheet across the rupture line ( $\beta$ )” for “bond strength ( $\beta$ )”

p 25 para 4 line 2: Add “ $b$  is bond strength per unit bonded area,” at the end of the line

p 61 para 3: Add at the end of the paragraph: “The saturation of the fibres is not a problem for measurements of paper embedded in resin but must be considered when performing measurements on individual fibres.”

p 63 para 2: Add at the end of the paragraph: “Spherical aberration is not a significant effect in this study because our measurement distance inside the sample was only about  $10\mu\text{m}$  and the difference of RI between resin and fibre is very small.”

p 67 para 1 line 7: Add “Manual adjustment of the threshold will introduce operator bias. However, as the measured results (see Subsection 4.5.1) showed that the bias was not significant in this study.” after “manually adjusting the threshold”.

p 72 Figure 4-9: The arrows from left to right should be labelled as “1, 2, 3, 4 and fibre of interest”.

p 86 para. 1: Delete the last sentence and add: “The fibre lengths of both accepts and rejects are similar to that of the starting stock.”

p 99 para 1 line 4: “This suggests...” for “This indicates...”

p 111 in Figure 7.5: Replace “RejP<sub>1</sub>” for “Rej-P<sub>0</sub>” and replace “RejP<sub>5</sub>” for “Rej-P<sub>H</sub>”

p 113 end paragraph: Add “In Table 7-2,  $N_{cm}$  is now the number of contacts per metre of fibre length.”