

# FEC CHAIN

CORPORATION

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## TEST CERTIFICATE

|                                |                                                                                                                                                                                                                                                                                                         |                                     |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| Distributor:                   | code #: 1080                                                                                                                                                                                                                                                                                            | distributor's name: ASAO & CO., LTD |
| Customer:                      |                                                                                                                                                                                                                                                                                                         | customer's name: LK HOIST CO.,LTD   |
| Article name:<br>(Application) | Load chain for electric chain hoist                                                                                                                                                                                                                                                                     |                                     |
| Spec. standard                 | <input type="checkbox"/> DIN EN 818-7:2002 , <input type="checkbox"/> JIS B 8812:1999<br><input type="checkbox"/> ISO 3077 , <input checked="" type="checkbox"/> FEC                                                                                                                                    |                                     |
| Material spec.:                | SAE15B24(Mn-B steel)                                                                                                                                                                                                                                                                                    |                                     |
| Finish:                        | <input checked="" type="checkbox"/> temper-colored, <input type="checkbox"/> zinc-plated, <input type="checkbox"/> coated( )<br><input type="checkbox"/> zinc-phosphated, <input type="checkbox"/> manganese-phosphated<br><input checked="" type="checkbox"/> oiled, <input type="checkbox"/> no-oiled |                                     |
| Stamping:                      | <input type="checkbox"/> FEC standard, <input checked="" type="checkbox"/> customer's request<br>→ LK, JAPAN , (Lot #), FEC#                                                                                                                                                                            |                                     |

|                |               |
|----------------|---------------|
| Product code#: | FCD07121      |
| description:   | φ 7.1*P21     |
| quality type   | G80/ type-DAT |

|                                 |      |                 | Result      |
|---------------------------------|------|-----------------|-------------|
| Dimention:                      |      |                 |             |
| Nominal diameter( dn )          | [mm] | 7.1 +0.0/-0.3   | 7.0~7.1     |
| Internal width,min.:            | [mm] | 8.8             | 9.2~9.5     |
| external width, max.:           | [mm] | 23.6            | 23.4~23.5   |
| Nominal pitch 1 t               | [mm] | 21.0 +0.3/-0.1  | 21.0~21.2   |
| 5 t                             | [mm] | -               | -           |
| 11 t                            | [mm] | 231.0 +0.3/-0.7 | 230.7~231.3 |
| Diameter at the weld(ds), max.: | [mm] | 7.6             | 7.4~7.5     |

|                                       |           |                   |           |
|---------------------------------------|-----------|-------------------|-----------|
| Mechanical properties:                |           |                   |           |
| Working load limit(WLL), max.:        | [ kg ]    | 1200              | -         |
| (drive mechanism g                    |           | -                 | -         |
| Manufacturing proof force(MPF), min.: | [ KN ]    | 40                | 40        |
| Stress at min. MPF                    |           | -                 | -         |
| Guranteed breaking force(BF), min.:   | [ KN ]    | 63                | 67~74     |
| Stress at min. BF                     |           | -                 | -         |
| Total ultimate elongation(A), min.:   | [ % ]     | 10                | 13~17     |
| Surface hardness/HV3, min.:           | [ - ]     | 500               | 565~616   |
| /HV5, min.:                           | [ - ]     | -                 | -         |
| Hardness /HRC, min.:                  | [ - ]     | -                 | -         |
| Case depth,min.:                      | [ mm ]    | 0.14              | 0.18~0.20 |
| Bend deflection( f ),min.:            | [ mm ]    | no visible defect | OK        |
| Fatigue resistance, min.:             | [ cycle ] | 2*10 <sup>6</sup> | OK        |

|                   |         |              |
|-------------------|---------|--------------|
| Packing:          |         |              |
| Weight per meter: | [kg/m]  | 1.1          |
| Length 1          | [meter] | 200m-60/pcs  |
| 2                 | [meter] | -            |
| Packing           | -       | Steel barrel |

I hereby certify above all is true.

*M. Ota*

MASAYUKI OTA  
Quality Assurance Dept.,  
Chief Inspector

issued date: November 20,2009

[Note]