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| System Test Plan |
| Cylinders & Orders Management System (COMS) Project |
| This document provides a plan for the testing work to be performed during the development of the Cylinders & Orders Management System. |

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**Cylinders & Orders Management System (COMS)  
 Project**

**System Test Plan**

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# 1. INTRODUCTION

Hoang Kim Joint Stock Company is one of the leading providers of printing cylinders in Vietnam. They are currently using the latest technologies from Germany and Japan, and their client bases include various Vietnamese corporations as well as across Southeast Asia.

The company would like to have an integrated IT system that can:

* Manage the main manufacturing process, i.e. sales orders and cylinders.
* Benchmark employees’ performance to calculate bonuses.
* Give management reporting tools for daily operations.
* Be easy to maintain and to add new features in the future.

## Purpose

The purpose of this document is to provide a plan for the testing work to be performed during the development of the Cylinders & Orders Management System.

## Audience

The intended reader of this plan is the project leader, who is responsible for carrying out the testing of the system. This document should provide all the necessary instructions.

## Organisation

The testing approach and procedure is summarised in Section 2. The test data set is defined in Section 3. Finally, Section 4 specifies each of the system tests to be performed.

## References

To fully understand the background to this project, the reader should also be familiar with:

1. COMS Project Plan, reference GG/COMS/MP.1/2, version 2.0, dated 1 February 2011.
2. COMS Quality Plan, reference GG/COMS/MQ.1/3, version 3.0, dated 13 September 2011.
3. COMS User Requirement Specifications, reference GG/COMS/TS.1/1.1, version 1.1, dated 1 February 2011.
4. COMS High Level Design Specifications, reference GG/COMS/TS.2/1, version 1.0, dated 7 April 2011.
5. COMS Change CylinderPriority UCRR, reference GG/COMS/TS.2/1, version 1.0, dated 29 April 2011
6. COMS Export Cylinder Queues UCRR, reference GG/COMS/TS.2/2, version 1.0, dated 29 April 2011
7. COMS Login UCRR, reference GG/COMS/TS.2/3, version 1.0, dated 29 July 2011
8. COMS Logout UCRR, reference GG/COMS/TS.2/4, version 1.0, dated 29 July 2011
9. COMS Manage Employee-Role UCRR, reference GG/COMS/TS.2/5, version 1.0, dated 30 July 2011
10. COMS Manage Error UCRR, reference GG/COMS/TS.2/6, version 1.0, dated 15 May 2011
11. COMS Manage Performance Formula UCRR, reference GG/COMS/TS.2/7, version 1.0, dated 14 June 2011
12. COMS Manage Rights UCRR, reference GG/COMS/TS.2/8, version 1.0, dated 14 June 2011
13. COMS Manage Role Approval UCRR, reference GG/COMS/TS.2/9, version 1.0, dated 30 July 2011
14. COMS Manage Role UCRR, reference GG/COMS/TS.2/10, version 1.0, dated 14 June 2011
15. COMS Manage SalesOrder UCRR, reference GG/COMS/TS.2/11, version 1.0, dated 15 July 2011
16. COMS Manage User Account UCRR, reference GG/COMS/TS.2/12, version 1.0, dated 14 June 2011
17. COMS Manage Workflow-Step UCRR, reference GG/COMS/TS.2/13, version 1.0, dated 30 July 2011
18. COMS Print Step List UCRR, reference GG/COMS/TS.2/14, version 1.0, dated 14 June 2011
19. COMS Print Worker Marks Report UCRR, reference GG/COMS/TS.2/15, version 1.0, dated 14 June 2011
20. COMS Send CylinderToAParticularStep UCRR, reference GG/COMS/TS.2/16, version 1.0, dated 29 April 2011
21. COMS Start CylinderProductionProcess UCRR, reference GG/COMS/TS.2/17, version 1.0, dated 29 April 2011
22. COMS Stop CylinderProductionProcess UCRR, reference GG/COMS/TS.2/18, version 1.0, dated 29 April 2011
23. COMS Update Cylinder Status UCRR, reference GG/COMS/TS.2/19, version 1.0, dated 14 June 2011
24. COMS View&Print CylinderInformation UCRR, reference GG/COMS/TS.2/20, version 1.0, dated 29 April 2011
25. COMS View Cylinder Progress Log UCRR, reference GG/COMS/TS.2/21, version 1.0, dated 14 June 2011
26. COMS View EmployeeDetails UCRR, reference GG/COMS/TS.2/23, version 1.0, dated 29 April 2011
27. COMS View Error UCRR, reference GG/COMS/TS.2/24, version 1.0, dated 29 April 2011
28. COMS View Order Progress Log UCRR, reference GG/COMS/TS.2/25, version 1.0, dated 14 June 2011
29. COMS View SalesOrder UCRR, reference GG/COMS/TS.2/27, version 1.0, dated 29 July 2011
30. COMS View WorkflowQueues UCRR, reference GG/COMS/TS.2/22, version 1.0, dated 29 April 2011

# 2. TEST PROCEDURE

The aim of understanding system testing is to enable the project to demonstrate, with an acceptable degree of confidence, that the Cylinders & Orders Management System satisfies the requirement as defined in the system specification (ref 4).



## Approach

The basic method to be adopted will be to use a test data set, as defined in Section 3, to exercise and demonstrate the functions and features of the system. This will be done through a series of defines tests given in Section 4.

## Scope

The tests defined in Section 4 will attempt to demonstrate that the features and functions specified in the system specification (ref 4) operate correctly. However it should be noted that features that have no specific user requirement, have no tests identified to verify that the facilities operate correctly.

## Procedure

The system tests to be performed are defined in Section 4. System testing will be deemed complete when all the defined tests have been performed, documented, and approved by the Project Manager. For each test defined in Section 4, the following step shall be performed:

1. Determine the expected results of the test;

2. Carry out the test instructions and create any required hardcopy print-outs;

3. Compare the expected with the actual results. If the required results have not been achieved then define the required corrective action;

4. Fill out a test log form, as shown in Figure 2.1. Attach to the form with all the required print-outs, and file in the system testing workfile.

5. If the required results were not achieved then:

1. Implement the corrective action, as specified on the test log form;
2. Perform steps 2, 3 and 4 above. Create a NEW test log form for each repeated test;
3. Repeat (a) and (b) above until the test is successful.

When the tests have been completed, the system testing workfile should submitted to the Project Manager for approval.

**Figure 2.1 :** Test Log Form.

|  |  |
| --- | --- |
| Testing Log Form GG/Forms/Testing | |
| Project Name **Cylinders & Orders Management System** | |
| Test Identifier | File Ref **GG/COMS/TW.3/** |
| Tested by | Date |
| Approved by | Date |
| Test Description **(give brief description)** | |
| Expected Results **(refer to attached documents if necessary)** | |
| Actual Results **(refer to attached documents if necessary)** | |
| Test Status **(either** SUCCESSFUL **or** ERROR) | |
| Corrective Action or Remarks **(refer to attached documents if necessary)** | |

# 3. TEST DATA

The aim of this section is to define the basic data set to be used in the system tests defined in Section 4.



## Sales Orders

Figure 3.1 defines the sales orders to be used in the system tests.

## Cylinders

Figure 3.2 defines the cylinders to be used in the system tests.

## Employees

Figure 3.4 defines the employee information to be used in the system tests

## Departments

Figure 3.5 defines the departments to be used in the system tests.

## Workflow and Steps

Figure 3.6 defines the workflow and steps to be used in the system tests.

## Roles and Access Rights

Figure 3.7 defines the roles and access rights to be used in the system tests.

## Performance Formula

Figure 3.8 defines the performance formulas to be used in the system tests

## Error Codes

Figure 3.9 defines the error codes to be used in the system tests.

Figure 3.1: Sales Orders to be used in System Tests

Figure 3.2: Cylinders to be used in System Tests

Figure 3.3: Employees to be used in System Tests

Figure 3.4: Departments to be used in System Tests

Figure 3.5: Workflows and steps to be used in System Tests

Figure 3.6: Roles and Access Rights to be used in System Tests

Figure 3.7: Performance Formulas to be used in System Tests

Figure 3.8: Error Codes to be used in System Tests

4. TEST SPECIFICATION

The system tests to be performed, using the procedure defined in Section 2 and the test data given in Section 3, are listed in the following subsections. Note that unless otherwise stated, all tests assume that:

* The tester has access privileges set such that read, write, edit and delete operations are permissible for all record types



## Change Cylinder Priority

The aim of this test is to verify that the facilities to change the priority of a particular cylinder operate as specified in the specifications (ref 4, 5).

### Test: Update for Cylinder Priority

1. Before commencing, ensure that there is valid cylinder information in the system. Refer to section 4.20 for more details.
2. Select the **Change Cylinder Priority** command from the **Cylinder Menu**. The list of existing cylinders will be shown.
3. Select one of the cylinders in the list which has a low priority and change it to high priority. Save the change.
4. Reload the list to ensure the changes have been saved.
5. Select one of the cylinders in the list which has a high priority and change it to low priority. Save the change.
6. Reload the list to ensure the changes have been saved.
7. Print out the screen shot of the cylinder status before and after the priority change to demonstrate the correct information is stored.

## Export Cylinder Queues

The aim of this test is to verify that the facilities to export cylinder queues operate as specified in the specifications (ref 4, 6).

### Test: Export Cylinder Queue

1. Before commencing, ensure that there is valid cylinder information in the system. Refer to section 4.20 for more details.
2. Select the **Export Cylinder Queue** command from the **Cylinder Menu**.
3. Print out the exported queue information, and print out the screenshots of the step list (section 4.14) and cylinder list (section 4.20) to demonstrate the correct information is exported.

## Login

The aim of this test is to verify that the facilities to allow a user to log into the system operate as specified in the specifications (ref 4, 7).

### Test: User Login

1. Before commencing, ensure that no user is currently logged in to the system.
2. Select the **Login** command from the **Login Menu**. Enter a valid user account id and password from the employee data in Figure 3.3
3. Print out the subsequent screenshot to show the successfully log-in of the user account.

## Logout

The aim of this test is to verify that the facilities to allow a user to log out of the system operate as specified in the specifications (ref 4, 8).

### Test: User Logout

1. Before commencing, ensure that a valid user is currently logged in to the system. (See section 4.3).
2. Select the **Logout** command from the **Login Menu**.
3. Print out the subsequent screenshot to show the successfully log-out of the user account.

## Manage Employee-Role

The aim of this test is to verify that the facilities to manage the employee-role relationships operate as specified in the specifications (ref 4, 9).

### Test: Add Employee-Role

1. Before commencing, ensure that there is valid cylinder information in the system. Refer to section 4.20 for more details.

### Test: Refresh Employee-Role

1. Before commencing, ensure that there is valid cylinder information in the system. Refer to section 4.20 for more details.

### Test: Remove Employee-Role

1. Before commencing, ensure that there is valid cylinder information in the system. Refer to section 4.20 for more details.

## Manage Error

The aim of this test is to verify that the facilities to manage the error codes operate as specified in the specifications (ref 4, 10).

## Manage Performance Formula

The aim of this test is to verify that the facilities to manage the performance formula operate as specified in the specifications (ref 4, 11).

## Manage Rights

The aim of this test is to verify that the facilities to manage the access rights operate as specified in the specifications (ref 4, 12).

## Manage Role Approval

The aim of this test is to verify that the facilities to manage the role approvals operate as specified in the specifications (ref 4, 13).

## Manage Role

The aim of this test is to verify that the facilities to manage roles operate as specified in the specifications (ref 4, 14).

## Manage Sales Order

The aim of this test is to verify that the facilities to manage sales orders operate as specified in the specifications (ref 4, 15).

## Manage User Account

The aim of this test is to verify that the facilities to manage user accounts operate as specified in the specifications (ref 4, 16).

## Manage Workflow-Step

The aim of this test is to verify that the facilities to manage the workflow and steps operate as specified in the specifications (ref 4, 17).

## Print Step List

The aim of this test is to verify that the facilities to print the list of step list operate as specified in the specifications (ref 4, 18).

## Print Worker Marks Report

The aim of this test is to verify that the facilities to print the work marks reports operate as specified in the specifications (ref 4, 19).

## Send Cylinder To A Particular Step

The aim of this test is to verify that the facilities to send a cylinder to a particular step operate as specified in the specifications (ref 4, 20).

## Start Cylinder Production Process

The aim of this test is to verify that the facilities to start the cylinder production process operate as specified in the specifications (ref 4, 21).

## Stop Cylinder Production Process

The aim of this test is to verify that the facilities to stop the cylinder production process operate as specified in the specifications (ref 4, 22).

## Update Cylinder Status

The aim of this test is to verify that the facilities to update the cylinder status operate as specified in the specifications (ref 4, 23).

## View & Print Cylinder Information

The aim of this test is to verify that the facilities to view and print the cylinder information operate as specified in the specifications (ref 4, 24).

## View Cylinder Progress Logs

The aim of this test is to verify that the facilities to view the cylinder progress logs operate as specified in the specifications (ref 4, 25).

## View Employee Details

The aim of this test is to verify that the facilities to view employee details operate as specified in the specifications (ref 4, 26).

## View Error

The aim of this test is to verify that the facilities to view errors operate as specified in the specifications (ref 4, 27).

## View Order Progress Logs

The aim of this test is to verify that the facilities to view the order progress logs operate as specified in the specifications (ref 4, 28).

## View Sales Order

The aim of this test is to verify that the facilities to view sales orders operate as specified in the specifications (ref 4, 29).

## View Workflow Queues

The aim of this test is to verify that the facilities to view workflow queues operate as specified in the specifications (ref 4, 30).

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| **Project Name COMS Project** | | |
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