



---

|                      |                 |
|----------------------|-----------------|
| <b>Document No.</b>  | GIS 30-411      |
| <b>Applicability</b> | Group           |
| <b>Date</b>          | 31 October 2003 |

---

# **Guidance on Industry Standard for Data Historian Systems (DHS)**

---

**GIS 30-411**

---

**BP GROUP**  
**ENGINEERING TECHNICAL PRACTICES**

## Foreword

This is the first issue of Engineering Technical Practice (ETP) BP GIS 30-411. This Guidance on Industry Standard (GIS) is based on parts of heritage documents from the merged BP companies as follows:

### BP

1400-20-IC-LI-5301      Process Control System and Human-Machine Interface Equipment Selection List.

### BP (Pre-1999)

GS 130-8                      Guidance for Specification of Control Systems.  
GS 130-8                      Guidance for the Supply of Control Systems.

### Amoco

PTA AD-PEP-00-G          Administration—PTA Engineering Practices—Guide.  
PTA PC-DCS-00-P          Process Control—DCS—Supply Specification.

Copyright © 2003, BP Group. All rights reserved. The information contained in this document is subject to the terms and conditions of the agreement or contract under which the document was supplied to the recipient's organization. None of the information contained in this document shall be disclosed outside the recipient's own organization without the prior written permission of Manager, Standards, BP Group, unless the terms of such agreement or contract expressly allow.



## Table of Contents

|                                                 | Page |
|-------------------------------------------------|------|
| Foreword .....                                  | 2    |
| 1. Scope .....                                  | 4    |
| 2. Normative references.....                    | 4    |
| 3. Symbols and abbreviations .....              | 4    |
| 4. General.....                                 | 5    |
| 4.1. Data Historian components .....            | 5    |
| 4.2. General guidance for control systems ..... | 5    |
| 4.3. Conflicting requirements .....             | 5    |
| 4.4. Proposal .....                             | 5    |
| 4.5. DHS demonstrations .....                   | 6    |
| 4.6. Training.....                              | 6    |
| 5. DHS functionality .....                      | 6    |
| 6. DHS server software.....                     | 7    |
| 6.1. General.....                               | 7    |
| 6.2. Driver configuration.....                  | 7    |
| 6.3. Driver management .....                    | 8    |
| 6.4. Viewing DHS data.....                      | 8    |
| 6.5. Data filtering.....                        | 8    |
| 6.6. Data compression .....                     | 8    |
| 6.7. Calculated data.....                       | 9    |
| 6.8. Event related data.....                    | 9    |
| 6.9. Event driven alarms or messages .....      | 9    |
| 6.10. Scheduler and backup .....                | 10   |
| 7. DHS capacity .....                           | 10   |
| 7.1. General.....                               | 10   |
| 7.2. Database load distribution.....            | 10   |
| 7.3. Database centralisation.....               | 11   |
| 7.4. Accessing redundant servers .....          | 11   |
| 7.5. DHS to DHS communications .....            | 11   |
| 8. Software compatibility .....                 | 11   |
| 9. DHS documentation.....                       | 12   |



## 1. Scope

This Guidance on Industry Standard (GIS) provides guidance on Data Historian System including their general purchase and functionality, server software, capacity, software compatibility, and documentation. Targeted audience for this GIS is the supplier of the data historian systems (DHS). Guidance on how to configure it etc. is found in GP 30-41.

## 2. Normative references

The following normative documents contain requirements that, through reference in this text, constitute requirements of this technical practice. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this technical practice are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies.

### BP

|            |                                                                             |
|------------|-----------------------------------------------------------------------------|
| GIS 30-451 | Guidance on Industry Standard for Human Machine Interface.                  |
| GIS 30-491 | Guidance on Industry Standard for Procurement of Control Systems - General. |
| GP 30-41   | Guidance on Practice for Data Historian Systems.                            |
| GP 30-45   | Guidance on Practice for Human Machine Interface.                           |
| GP 30-49   | Guidance on Practice for Control System Documentation.                      |
| GP 30-60   | Guidance on Practice for Process Control Networks.                          |

## 3. Symbols and abbreviations

For the purpose of this GIS, the following symbols and abbreviations apply:

|        |                                                         |
|--------|---------------------------------------------------------|
| API    | Application programming interface.                      |
| DHS    | Data historian systems.                                 |
| HMI    | Human machine interface.                                |
| ODBC   | Open database connectivity.                             |
| OLE    | Object linking and embedding.                           |
| OPC    | OLE (object linking and embedding) for process control. |
| PAS    | Process automation system.                              |
| PCN    | Process control network.                                |
| SQL    | Standard query language.                                |
| TCP/IP | Transmission control protocol/internet protocol.        |

